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1 INTRODUCTION

In recent years, the subject of disability has attracted considerable attention in Kazakhstan. The primary reason for this interest is the enactment of a law in 2005 protecting the rights of disabled persons and the operation of public programs in 2002-2005 and 2005-2007 intended to rehabilitate those disabled. These programs reflect the Government of Kazakhstan's (GoK's) goals of improving social protection of the disabled, and of implementing anti-discrimination policies to ensure equal opportunity for disabled people. A second reason is the enactment in 2005 of two laws concerning obligatory social insurance and employers' obligatory insurance. These laws aimed foremost to promote the country's new life insurance market, but, by creating an urgent demand for disability tables from life insurance companies, they had implications as well for a better understanding of the nature of disability. Given the limited number of published research on disability in Kazakhstan and the lack of publicly available disability statistics, these laws have accelerated the need for disability research[1]. Among the questions that need to be answered are: What is the true pattern of disability in Kazakhstan? Is the incidence of disability decreasing? What is the life expectancy of Kazakhstan's disabled?

In order to address these questions, we attempt first to create an historical picture of disability in Kazakhstan by analyzing government population statistics and studying the evolution of disability determination procedure in the former Soviet Union and independent Kazakhstan. Doing so is not a trivial task, as there has been almost no systematic research, either in Russian or English.[2]

However, the effort is useful, as it enables us to cast light on the set of problems concerning disability in Kazakhstan, including those that remain hidden in the official reports.

[1] To our knowledge there is only one book published in Kazakhstan that addresses disability-related issues, written by Doctor of Medical Science Galina Kalievna Kausova, Conceptual approaches toward a strategy of strengthening health and prophylactic measures against disability at a consequence of heart and circulatory vessel illnesses. Almaty: 2002, 233 pp.

[2] The best expression of the challenges faced in collecting and interpreting disability data were made by Russian economists almost a decade ago: "It is paradoxical, but true, that the most mysterious aspect of disability (in Russia) is the elementary task of estimating the number and composition of the disabled" (Vasin *et al.*, 1999). The same opinion regarding the legislative framework of disability protection was expressed by Madison (1989): "In 1984, a Soviet authority wrote that 'layers of acts…[and] constant additions and changes…have led to a situation when even specialists find it difficult at times to implement the social security legislation in practice."

We conclude that the optimistic official picture of disability patterns in Kazakhstan is almost certainly inaccurate. As the following pages detail, the quality of official disability data is high, and much can be learned from the patterns. However, changing definitions and strictness of enforcement make time series comparisons problematic, and the improvements in adult disability recorded are inconsistent both with trends for children, and with mortality trends. Rather, we note that barriers for applying disability benefits have increased and incentives to report disabilities have decreased markedly in the past 15 years, so that it is virtually certain that there is substantial hidden disability

2 EVOLUTION OF DISABILITY DETERMINATION IN KAZAKHSTAN

The recognition of persons as being legally disabled in Kazakhstan apparently began in the first quarter of the twentieth century, when Kazakhstan joined the Soviet Union. The social insurance system of blue and white collar workers, whose coverage included workers who had entirely lost their ability to work, was introduced in 1921, and theoretically became accessible to the residents of the new republic. Most likely, the coverage was slight, since only the urban population (then a tiny fraction of the population) was covered. A clear picture of disability dates only from the 1960s. In 1965, the legal rights of rural collective farm workers were put on an equal basis with workers and white and pink collar service sector employees and civil servants). This uniformity was further strengthened in 1967, when uniform eligibility for disability pensions across all socio-professional categories of citizens was established, along with a common medical-labor examination procedure to determine disability status (Vasin et al., 1999).

From 1980 through 1991, the conceptual framework for determination of disability status was set by the 1956 State Pension Law of the USSR.[3] According to Article 18, *all blue collar and white collar workers who have become disabled;* i.e., *have lost permanently or over a long*

[3] USSR, 1956 (June 14), *Law on Government Pensions of the USSR* (Закон о Государственных Пенсиях Союз Советских Социалистических Республик). Moscow: http://www.bestpravo.ru/ussr/data04/tex16184.htm

period of time their ability to work, have a right to receive a disability pension. Disability pensions are to be assigned irrespective of the time when disability incidence occurred: during the period of work; before starting to work; or after termination of work.

Thus, disability status was defined by loss of the ability to work. The definition in part reflects the Soviet Union's declaration that there was no unemployment (and, hence, no provision for disability for the unemployed). Moreover, as Makkaveiskii (1981) notes, Soviet legislation offered no explicit delineation of inability to work, and there were no criteria for distinguishing long-term and short-term inability to work. In each specific case, inability to work in the short term and its duration were determined by an authorized physician and confirmed by a sick leave certificate on the basis of instructions issued by the All-Union Central Council of Trade Unions (VSTsSPS).[4] Meanwhile, permanent disability was determined by Medical-Labor Expert Commissions (MLECs, later MSECs) on the basis of instructions issued in 1956 and used until 1992.[5] Taken together, the two directives implied that legitimate disability included any disorder, regardless of cause (injury, or physical or mental illness) that prevented or hindered work, or which would be aggravated by a person continuing to work (Makkaveiskii, 1981). If this "inability to work" lasted more than six months, a person could be identified as legally disabled.

Depending of the degree of the loss of the ability to work, three groups of disabled were distinguished. According to this classification, the first and second groups were those who lost the ability to work entirely; the third was comprised of those whose ability to work had decreased significantly. The difference between the first and second groups was that those in the first group needed constant care while those in the second did not. This three-group classification of disability was introduced in early 1932 and modified in 1954-1956 under Soviet legislation. It

[4] All-Union Central Soviet of Trade and Professional Unions, 1955 (November 5), *Instructions on the order of determining and paying allowances for government social insutance, as ratified by the Presidium of the All-Union Central Soviet of Trade and Professional Unions – instructions on the order of delivery of sick-lists* (Положение о порядке назначения и выплаты пособий по государственному социальному страхованию, [Утв.президимом ВЦСПС 5/11 1955г.] - Инструкция о порядке выдачи больничных листков). Moscow.

[5] USSR Ministry of Health, 1956 (August 2), *Instructions for the Determination of Disability Category, as ratified by the Ministry of Health and the All-Union Central Soviet of Trade and Professional Unions*. Moscow: USSR Ministry of Health. (Инструкция по определению групп инвалидности, утв. Минздравом СССР и ВЦСПС)

is still used (with modification) at the present time both in Russia and Kazakhstan, although since the dissolution of the USSR both countries have introduced their own pension and disability legislation.[6]

The same continuity holds for leading categories of disability allowances. To our knowledge, all CIS countries still categorize disabilities according to the following causes:

- general diseases;
- work-related injuries;
- occupational diseases; and
- disability from childhood.

The determination of disability groups in the Soviet era was made by the MLECs. This is still the case in Kazakhstan today, in spite of the fact that MLECs in 2000 were transformed into regional departments of the Ministry of Labor (RDMLs), thus acquiring "state enterprise" status. Unfortunately, independent Kazakhstan has not yet established a disability research institution able to update old and develop new rules based on the study of disability and rehabilitation, as was done within the walls of eight scientific research institutes dealing with the disability issues in the USSR.

These institutes were located mainly in the Russian Federation, Ukraine, Byelorussia, and Uzbek SSRs. Somewhat paradoxically, it appears that in 1992, when methodological instructions stopped coming from Moscow, Kazakhstan actually preceded Russia and Belarus in implementing new disability criteria, due the fact that its Ministry of Labor and Social Protection (MLSP) specialists learned from others' experience and quickly adapted lessons gained during (infrequent) seminars in which they participated.[7] Clearly, all progressive initiatives taken by Kazakhstan in developing its disability determination procedures were implemented thanks to the initiative and enthusiasm of a handful of key specialists, who kept trying to comply with shifting social policy requirements and new international norms, in spite of a lack of research experience, and limited research capabilities.

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[6] Cabinet of Ministers *Resolution No. 571,* July 16, 1992, Regulation *of the Medical-Social Expertise Commissions.*

[7] The new criteria appeared in Republic of Kazakhstan Cabinet of Ministers *Resolution No. 531,* July 16, 1992, with the somewhat curious title "The basic criteria of determination of disability and medical evidence for provision with technical and other means of transportation."

From **Table 2.1**, it can be seen that the new approach differed from that used in the previous 31 years of the Soviet era (plus one half year of independence) by considering disability from a wider range of life activity limitations, and not only lost work ability. By including the majority of criteria listed on the *Short List of Activity Limitations and Participation* [ALP] *of International Classification of Functioning, Disability and Health* (WHO,September 2003), Kazakhstan took an important step toward adopting international standards of disability determination. At present, from all of the domains contained in the ALP, Kazakhstan's procedure is based on the following:

- Self care ability
- Ability for mobility
- Orientation Ability
- Communication ability
- Ability for self-control behavior
- Work ability
- Learning ability.[8]

The most remarkable pattern of Kazakhstan's new procedure is its merging of the Soviet-era 3-group disability classification and ICF ALP domains. Russia itself introduced a very similar procedure only in 1997. It is beyond this paper's scope to determine the reason for the delay in Russia and Belarus. However, it is important to recognize that MSEK's new approach to disability determination reflected a major change in the disability definition in the 1990 law *On Basic Principles of Social Security of Disabled Persons in the USSR.*.[9] It seems most likely that the main contribution to this law were made, in order of priority, by Belarus Scientific Institute of Expertise on Ability to Work and Organization of Work for the Disabled (BNILETIN) and the Central Scientific Institute of Expertise on Ability to Work and Organization of Work for the Disabled (TSIETIN). Our presumption is based on Smychek et al.'s (2004) statement that BNILETIN began to reconsider the existing approach toward to determine disabled even during the Soviet era.[10]

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[8] Government of the Republic of Kazakhstan, 2005 (July 20), *Rules Governing the Conduct of the Medical-Social Expertise Commissions.* Astana: Government of Kazakhstan, decree no. 750.

[9] USSR, 1990 (December 11), *Law on the Basic Principles of Social Security of Disabled Persons in the USSR.* Moscow: Kremlin, law №1826-1.

[10] Specifically, they write: *The Proclamation № 349 of the Council of Ministers of the Byelorussian SSR of November 21, 1986 regarding the basic assignment of the Institute was defined by a reconsideration of the approaches to prophylactic measures regarding disability*

The 1990 USSR Disability Law then became the basis for republican disability laws, which were enacted with similar names and identical content in Kazakhstan, Uzbekistan, Belarus, and probably other USSR republics. Thus, either immediately prior to the Soviet Union's dissolution, or at some point thereafter, all of these countries accepted the following definition of disability:

> *A disabled person is someone who needs social assistance or protection due to life activity limitations resulting from physiological or mental defects. Disability (life activity limitation) of a person consists of partial or full loss of his/her ability or possibility to care for him/herself, mobility, orientation, communication, self control, and ability to work.*[11]

Table 2.1
Evolution of disability determination criteria in Kazakhstan, 1956-2005

	Group of Disability	Scale of impairments of body functions	Cause	Life Activity Limitations	including:							The need for care and help from others	The degree of social	
					Self care ability	Ability for mobility	Orientation Ability	Communication ability	Ability for self-control behavior	Work ability	Learning ability		Adaptation	Maladaptation
01.08.1956 - 16.06.1992	I	Extremely Severe (full blown)	not indicated		Abs.[6]					c.abs. or p.abs.[1]		cst		
	II	Severe Level IV	not indicated							c.abs. or p.abs.[2]		not cst care		
	III	Evident	Chronic diseases or anatomical defects							SL[3]				
16.06.1992 - 24.08.2000	I	Extremely Severe (full blown)	diseases, trauma consequences, birth defects	Extremely Severe	Abs.	Abs.	Abs.	Abs.	Abs.	Abs. & possibility[4]	Abs.	cst	ES	
	II	Extremely Severe (full blown)	-"-	ES	ESD	ESD	ESD	ESD	ESD	Abs. or ESD	ESD	not cst care	S	
	III		-"-	present		SD		SD		SD[5]	SD			SL

and rehabilitation of the ill and disabled, with the goal of achieving their social integration. The essence of the government's measures regarding the problem of disability was the establishment of fundamental principles formulated by the Global Program of Action Regarding the Disabled, adopted by the United Nations for the years 1988-1992 (Smychek *et al.*, 2004).

[11] Republic of Kazakhstan Law № 692-XII, 1991 (June 21), On Social Protection for Disabled Persons in the Republic of Kazakhstan.

Since 24.08.2000.	I	Persistent, significant, or full blown IV level	diseases, trauma consequences, birth defects		III dgr	III dgr	III dgr	III dgr	III dgr					
	II	Persistent and significant Level III	-"-		II dgr	II dgr	II dgr	II dgr	II dgr	III & II dgrs	III & II dgrs			
	II I	Moderate and persistent Level II	-"-		I dgr	I dgr	I dgr	I dgr	I dgr	I dgr	I dgr			

[1] –possible to fulfill particular jobs under special conditions designed for particular individuals (special manufacturing work, work in home, special work facilities, *et c.*)

[2] –possible to fulfill particular jobs for persons with severe chronic diseases, with the combined defects of locomotive system and significant loss of sight - conditions when work is not prohibited under special conditions outlined in note 1

[3] - necessity of transition to a lower level of qualification, change of work conditions at current occupation, reduction of volume of work

[4] - possible to fulfill particular jobs given the provision of special amenities for the individuals with anatomic defects or impairments of body functions; the design of special conditions in place of employment or in the home

[5] - Significant reduction of working activity, significant decline in qualification level, and/or significant difficulties in professional work performance due to anatomic defects

[5] - abbreviations used:

"absent" – abs.; severe – S; extremely severe difficulty – ESD; Extremely Severe – ES; Completely absent – c.abs., prolonged absence – p.abs.; severe difficulty –SD; Significantly low – SL; degree – dgr, constant - cst

Comparing this definition with the previous Soviet definition, note that the 1990 law gives the legal eligibility right to disability allowances or pensions to all categories of people, regardless of employment status. However, the most important significance of the new law was legalization of the status of disabled children (O.P. Prjatkina, 1998), as children did not fit into any of the categories of "disabled people" according to the earlier definition. This does not mean that children were not determined to be disabled in the USSR. Rather, the criterion of their of recognition was validated only as of 1979, and then on very strict guidelines base on USSR Ministry of Health *Instruction № 1256*, which hardly gave adequate protection to disabled children. [12]

Of course, the 1990 USSR disability law and corresponding republican laws only gave directions. Thus, issues related to the development of disability determination methodology on the basis of international standards became the responsibility of specialists of Ministry of Labor in each former Soviet republic upon the attainment of independence. From one side, it was attractive to be among the first in a country to make one's own decisions, rather than to simply comply with instructions from Moscow. But, on the other hand, it was problematic for republics

[12] USSR Ministry of Health, 1979 (December 14), *Instruction № 1256*, "On the order of establishing medical conclusions for disabled children under 16 years of age." [Приказ Минздрава СССР № 1256 от 14 декабря 1979 г. "О порядке выдачи медицинского заключения на ребенка-инвалида в возрасте до 16 лет"]

like Kazakhstan to implement the tasks set forth by the disability law, given the absence of a methodological research institute or experience in the area of disability evaluation. Thus, development of the disability determination procedure in Kazakhstan most probably followed Belarusian methodology, and doing so was both justifiable and rational. [13]

Furthermore, it is important for comparative purposes for former Soviet states to maintain a uniform methodology in all areas of disability study, including statistics, definition, and determination procedures. Most likely, there is an organization that tries to manage this issue, but unfortunately, in the absence of easily accessible information about collaborative projects and in the absence of references to the original documents in official instructions and rules, at least in Kazakhstan, it is impossible to determine whether the new version (April 13, 2005) of the law *On Social Protection of Disabled Persons in the Republic of Kazakhstan* was a result of an international organization's assistance to CIS countries. [14, 15] However, it is worth noting that the same definition of disability is used in the January 1998 Russian federal law *On Social Protection for Disabled Persons in Russian Federation.*[16] According to this latest definition:

> *A disabled person is one who has a health impairment with persistent significant impairments of body functions, resulting from diseases, trauma and its consequences, or defects, and that leads to disability and necessity of social protection.*[17]

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[13] This assertion is based on a verbal explanation provided by one of the former MLSP specialists. Specialists currently working in the Department of Medical-Social Expertise could not specify the exact source of their new disability determination rules. Unfortunately, it remains common in government bodies in former Soviet republics not to reference the original document from which an idea is taken or on which a law or decree is based. Thus, in the absence of any references in any disability determination instructions developed in Kazakhstan, and given verbal information that it came from Belarus, we can only suppose that the model forms came from BNILETIN (Белорусский научно-исследовательский институт экспертизы трудоспособности и организации труда инвалидов Министерства социального обеспечения Белорусской ССР [БНИИЭТИН]), which is the only plausible research institute in this area in Belarus.

[14] Republic of Kazakhstan Law № 39-III ЗRK, 2005 (April 13), *On Social Protection for Disabled Persons in the Republic of Kazakhstan.*

[15] We also were unable to find references to a common source in any of the procedures of other CIS countries available to us.

[16] Russian Federation Law № 181-F3, 1995 (November 24), *On Social Protection of Disabled Persons in Russian Federation.*

[17] *Инвалид - лицо, имеющее нарушение здоровья со стойким расстройством функций организма, обусловленное заболеваниями, травмами, их последствиями, дефектами, которое приводит к ограничению жизнедеятельности и необходимости его социальной защиты.*

In fact, the significance of these two laws consists not specifically in the disability definition, but rather in the articles that set forth disabled persons' rights and equal opportunities, and a corresponding commitment to create government policies to provide for disabled people.

Our motivation in this discussion is to confirm that Russia and Kazakhstan have not only same disability laws, including definition of disability, but similar disability determination criteria. As mentioned above, Kazakhstan preceded Russia by implementing new disability determination criteria in 1992, based on some of the International Classification of Functioning ALP domains. However, Russia's 1997 temporary criteria were more modernized, owing to introduction of qualifiers that denote the level of the severity of life activity limitation in the same set of domains Kazakhstan chose in 1992 (**Table 2.2**) and scale of impairments of body functions (**Table 2.3**). [18] [19]

Table 2.2
Classification of main categories of life activity and life activity limitations according to level of severity according to disability determination criteria in Russia Federation (1997) and Kazakhstan (2000)

main category of life activity		Definition	life activity limitation by level of severity		
			level I	**level II**	**level III**
1	**Self care ability**	self-care and other activities of daily living (ability to look after oneself in regard to basic physiological needs, personal hygiene, running a household)	with supporting appliances	with supporting appliances and/or help from others	Self-Care inability and full dependence on others
2	**Mobility**	Ability to move in space independently, overcome obstacles, to keep the body in balance in household activities, at public places, and in professional work areas.	under longer time and distance reduction	with supporting appliances and/or help from others	Self-Care inability and full dependence on others
3	**Learning ability**	ability to perceive and reproduce knowledge (educational, professional, *et c.*), and to master skills (social, cultural, and household)	in educational institutions of general type under special conditions with supporting appliances and/or help from others	only in special educational institutions or under special programs designed for home use	inability to learn
4	**Work ability**	Ability to carry out activity	under decreased level of	under special	inability to work

[18] See Russian Federation Ministry of Labor and Social Development and RF Ministry of Health, 1997 (January 29), *Proclamation № 1/30: On determining classifications and temporary criteria for use by the Medical Social Expert Commissions.*

[19] As Table 2.1 indicates, an updated version of Kazakhstan's disability criteria substituted for the previous version in August, 2000 uses same qualifiers. Since neither country's instructions reference the original documents, we cannot verify the claim by specialists in Kazakhstan's MLSP that they elaborated the corresponding procedure on the basis Belarussian experience, and cannot confirm that Russia's criteria were the result of assistance of the Collaborating Center for the WHO-FIC in Russia. However, it appears that the Collaborating Center in 2004 intended to introduce ICF not only in Russia, but in CIS countries "according to the meeting of Ministers of Health of these states" (http://www.nordclass.uu.se/WHOFIC/papers/reykjavik5.pdf)

		satisfactorily with the requirements to meet conditions of work and its maintenance and volume	qualification or reduction of volume of work, inability to work in previous profession	conditions, with supporting appliances, and/or the special equipment on working place and/or with help from others	
5	**Orientation Ability**	the ability to orient oneself in time and space	with supporting appliances	Orientation ability requires help from others	inability to orient (disorientation)
6	**Communication ability**	Communication ability through interaction with other people based on information perception, recognition, processing and transfer of information	a decrease in speed of communication, reduction in the extent of mastering, receiving and transferring information	with supporting appliances and/or help from others	inability to communicate
7	**Self-control behavior**	Ability of comprehension of oneself and adequate behavior according to social rules	partial decrease in ability to self-control	full or partial ability to self-control; full control with assistance of others only	inability to self-control

Table 2.3

Classification of main categories of life activity and life activity limitations according to level of severity, according to disability determination criteria in Russia Federation and Kazakhstan

Impairments of main body functions		**Level of severity of impairments of body functions**			
		I	**II**	**III**	**IV**
1	**MENTAL FUNCTIONS (perceptual, consciousness, attention, memory, intellectual, language, emotional, *et c*.)**	**MILD**	**MODERATE**	**SEVERE**	**COMPLETE**
2	**Sensory functions (seeing, hearing, tasting, sensation)**				
3	**Movement related functions**				
4	**Blood Circulation**				
	RESPIRATION, BREATHING				
	DIGESTIVE				
	Excrements				
	METABOLIC				
	endocrine secretion				

The only document in which we found reference to the ICF is in the MLSP's *Temporary methodical recommendations on the use of classification and criterion disability group determination*, issued in Kazakhstan in September 2004.[20] This reference ascertains that Kazakhstan's procedure is based on ICF at least to a certain extent. It is likely that a corresponding instruction with the same reference exists in the Russian legislation, though we were not able to find it. That there is a single source from which the procedures of disability determination in Russia and Kazakhstan are derived is obvious, due to the nearly identical approach used for incorporation of ICF into the 3-group disability classification inherited from

[20] RK Ministry of Labor and Social Protection, Order № 208-p, 2004 (September 17), *Temporary Methodologcal Recommendations for Use in the Application of Classification and Criteria for Determination of Disability Group*. Astana: MLSP. [Временные методические рекомендации по применению Классификаций и критериев определения групп инвалидности г. Астана 2004 г.. Методические рекомендации по применению Классификаций и критериев определения групп инвалидности].

the USSR. Specifically, both countries use the *Tenth Revision of International Classification of Diseases* for reporting the nosological form of main and coexistent diseases, and both employ a combination of the following three factors that serve as grounds for defining a person as disabled:

- health impairment with persistent disorder of body functions;
- restricted activities (complete or partial lack of ability or possibility to perform daily living activities, move by oneself, orientate oneself, communicate, control one's behavior, learn or work); and
- need for social assistance to perform daily living activities.

Table 2.4
Structure of clinical and functional diagnostics of disability determination in Kazakhstan

Characteristics	Description
Phase of pathological process	Determined in the case of diseases that have clinical classifications with enumerated progression – either stages of development (initial, developed, far gone), or numerical (first, second, *et c.*)
Disease process	Progressive, stationary (stable), or recurrent
Impairments of main body functions	Mental functions (perceptual, consciousness, attention, memory, intellectual, language, emotional, *et c.*)
	Sensory functions (seeing, hearing, tasting, sensation)
	Movement related functions
	Blood circulation, respiration, breathing, digestive, excrements, metabolic, endocrine secretion
Functional impairment level	- I level – mild, II level - moderate; - III level – severe, IV level – complete
Medico-biological prognosis	- favorable, when there is a possibility of stabilization or improvement of the health status and decrease in the degree of the body function impairments that have resulted in restriction of life activity; - unfavorable, when there is no possibility to stabilize health status, stop advance of the pathological process, and/or decrease the degree of bodily function impairments that have resulted in restriction of life activity; - amphibolic (acritical) prognosis.

Of course, there are some differences in Kazakhstan's and Russia's disability criteria. But, they are limited to greater detail in the descriptions of clinical and functional diagnostics in the Kazakhstani document (**Table 2.4**). Moreover, the absence of such a description in Russian procedure does not mean that they are not applied. Most likely, the authors of the Russian instructions considered the procedures obvious, because they are based on the traditional provisions of clinical medicine and medical-social examination, and therefore did not codify them.

In addition to the necessary characteristics of disability diagnosis described in Table 2.4, the new criteria of disability group determination (see footnote 8) mandates that analysis of the clinical and functional, social, and psychological factors of an individual being examined should be reflected in the social expert statement, with a statement addressing the following points:

1) detailed clinical and functional diagnosis;
2) evaluation of social status;
3) evaluation of professional-employment status;
4) category and degree of life activity limitation;
5) rehabilitation prognosis;
6) certificate of a disability group, cause of disability and term of re-examination; and
7) the need of an individual being examined to have social security and protection arrangements, including recommendations concerning medical and social rehabilitation.

The disability determination criteria inherent in the new methodology employed in Kazakhstan is more objective and rigid relative to that used in the Soviet era. In principle, the more restrictive the criteria, the less will be the chance to make a wrong decision in awarding disability status, so that the new criteria would appear to represent a tightening of eligibility conditions. But surprisingly, comparison of the total number of applications with the number determined to be not disabled (**Figures 2.1** and **2.2**) shows that the proportion of applicants denied was actually higher in the Soviet era. This pattern reflects the fact that, despite having fewer requirements for disability designation, the disability evaluation process was quite strict in the Soviet era. In part, this strictness was due to involvement of many parties: medical institutions that sent patients to MLECs; MLECs that were responsible for disability determination; and trade unions responsible for supervising the MLECs. Moreover, those responsible for wrong decisions were severely punished.

It is also possible that the decline in rejected applications reflects the unambiguous decline in general health status in the post-Soviet era, as shown by sharply rising mortality rates. It is further possible that the increased number of criteria in use today opens the door to new possible reasons for disability. The increased number relative to the Soviet era in the third, least severe disability group during 1992-2005 supports this last proposition (**Table 2.5**). At the same time, the decreasing proportion in the first, most severe disability group might indicate that new methodology does allow for better screening for different levels of health impairment.

Table 2.5

Distribution of newly disabled population, by disability group, %

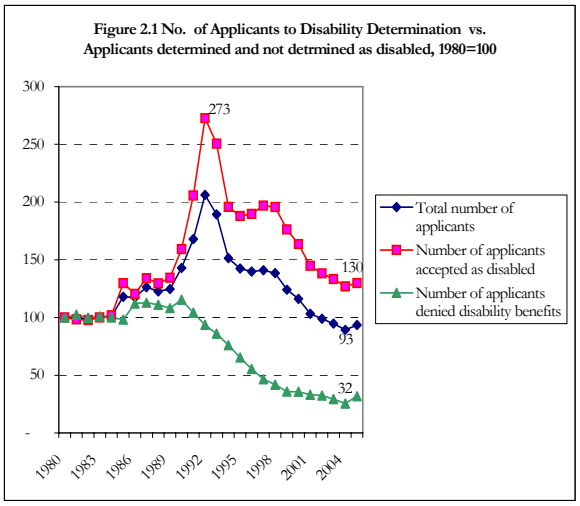
year	Employed population				Unemployed population			
	Total	1 group	2 group	3 group	**Total**	1 group	2 group	3 group
1980	100.0%	9.4%	59.3%	31.2%				
1981	100.0%	9.1%	60.1%	30.7%				
1982	100.0%	8.5%	60.7%	30.8%				
1983	100.0%	8.2%	60.7%	31.1%				
1984	100.0%	8.1%	62.0%	29.9%				
1985	100.0%	7.8%	62.3%	29.9%				
1986	100.0%	6.9%	61.5%	31.6%				
1987	100.0%	6.7%	62.2%	31.1%				
1988	100.0%	6.7%	63.1%	30.2%				
1989	100.0%	6.6%	64.5%	28.8%				
1990	100.0%	7.0%	63.6%	29.4%				
1991	100.0%	6.2%	63.3%	30.5%	100.0%	12.3%	67.6%	20.2%
1992	100.0%	7.2%	62.3%	30.5%	100.0%	16.9%	68.1%	15.1%
1993	100.0%	6.6%	61.9%	31.4%	100.0%	15.9%	68.6%	15.6%
1994	100.0%	6.6%	61.8%	31.6%	100.0%	16.2%	66.2%	17.5%
1995	100.0%	6.6%	62.3%	31.1%	100.0%	15.5%	66.6%	17.8%
1996	100.0%	6.2%	62.5%	31.2%	100.0%	14.7%	66.2%	19.0%
1997	100.0%	6.3%	58.4%	35.3%	100.0%	13.2%	65.7%	21.1%
1998	100.0%	6.6%	55.5%	37.9%	100.0%	12.4%	60.5%	27.0%
1999	100.0%	7.0%	55.0%	38.0%	100.0%	10.8%	55.2%	34.0%
2000	100.0%	7.7%	58.5%	33.8%	100.0%	11.2%	54.8%	34.0%
2001	100.0%	7.4%	57.5%	35.1%	100.0%	12.2%	58.4%	29.4%
2002	100.0%	7.7%	58.3%	34.0%	100.0%	12.1%	58.6%	29.3%
2003	100.0%	7.0%	60.6%	32.4%	100.0%	11.5%	60.7%	27.7%
2004	100.0%	6.1%	55.3%	38.6%	100.0%	11.5%	60.2%	28.2%
2005	100.0%	6.0%	55.0%	39.0%	100.0%	9.9%	54.4%	35.7%

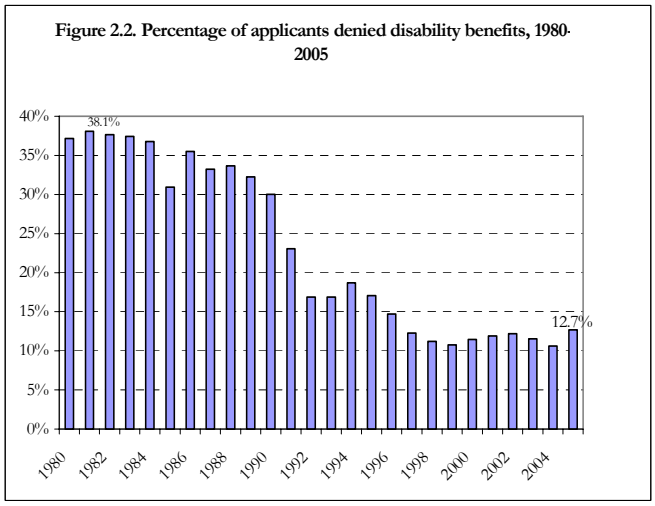
* according to official classification

In summary, despite Kazakhstan's substantial progress in the disability determination methodology since the USSR's collapse, numerous tasks remain to be completed, including applying ICF definitions in national clinical diagnosis and rehabilitation assessment guidelines, and improved detail and availability of disability data. We strongly recommend development of a uniform ICF user guide for all former USSR republics along with a common detailed strategy for ICF application. Most likely, some steps in this direction have been taken already, since there is a Collaborating Centre for the WHO-FIC that works in Russian, and which is intended to assist those working in Russian with international standards.[21] But, since there is no website for this center that publicly disseminates its work, we cannot ascertain whether it is participating in development of the disability criteria used by the MLECs (or RDMLs) throughout the CIS. Moreover, from the scant information available about this Center (Ovcharov, 2004), it appears to

[21] See http://www.who.int/classifications/network/collaborating/en/

advise only Belarus, Uzbekistan, Kyrgyzstan, and Ukraine on IFC problems, and is not involved with other countries, including Kazakhstan, at least not with its Ministry Labor and Social Protection. This lack of formal contact with a WHO body likely explains the reason of the absence of reference to the disability determination documents in both Kazakhstan and Russia.





Thus, we can not find an answer to the question of whether there is a common source for disability determination rules and procedures. Ultimately, this issue is one of importance not only for CIS countries that wish to maintain the longstanding tradition of having comparable disability data, but also to the WHO and other international organizations that promote the use of ICF worldwide. Initiation of formal discussion of establishing common CIS uniform disability determination procedures on the basis of ICF and applying ICF to existing disability data collection should be a priority for all organizations involved.

3 HISTORICAL PATTERNS OF DISABILITY IN KAZAKHSTAN

3.1 Exploring disability fluctuations

To the best of our knowledge, Kazakhstan's earliest disability statistics date from the beginning of 1970s, when the Central Statistical Office of the USSR (hereafter, Goskomstat USSR) approved two statistical forms:

1. The N7, which was a report of the *raion* (county, district, or municipal) medical-labor expert commission' and which kept track of disability incidence by diagnosis, category of disability, and age group. (Order No. 463, July 3, 1970)

2. The N94-RIK, which was a report on the number of pensioners and the amounts of monthly pensions assigned to them. (Order No. 384, June 6, 1972)

These forms, with slight changes made by specialists in the Ministry of Labor, are still in use in independent Kazakhstan. However, the National Statistical Committee (Goskomstat), through which all government statistics are ultimately vetted and reported, publishes only aggregate data, making the detailed information available only for official purposes. Lack of information accessibility plus an absence of disability research programs together have resulted in a limited number of published analyses of disability issues in Kazakhstan, particularly on the regular base.[22] This situation is destined to change. As Kazakhstan's insurance industry is developing rapidly, creating a need both for disability statistical data and relative risk analysis, the Government is likely to begin to address the problem, especially as it is clear that Kazakhstan lags behind not only Western states, but Russia and Belarus as well. The first and most obvious step is open publication of detailed disability indicators, with the incidence rate of disability being the most important one.[23]

Table 3-1 summarizes our technique for obtaining a reasonably consistent aggregate series for adult disability incidence. As categories for other former Soviet states are similar, it should be possible to construct similar series for other transition countries. This approach involves substantial residual inference, but also documents changes in definitions over four distinct time periods since 1970. Failure to account for these definitional changes risks misinterpretation of the officially reported fluctuations in disability dynamics. These fluctuations have been caused by many factors, including subjective ones such as particular government measures, described below. The result can be wildly inaccurate conclusions.[24]

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[22] Our conclusion regarding the limited number of publications on disability issues in Kazakhstan stems also from exhaustive but unsuccessful attempts to find such works or reference to them through the Internet.

[23] In this connection it is particularly baffling that Kazakhstan has given the prerogative of publishing this indicator to the Interstate Statistical Committee of the Commonwealth of Independent States, which publishes annually aggregate incidence rate of disability of almost all CIS countries, including Kazakhstan. See Commonwealth of Independent States, Interstate Statistical Committee, various years, *Official Statistics of the Countries of the Commonwealth of Independent States*. Moscow: CIS http://www.cisstat.com/eng/cd-offst.htm.

[24] For example, the WHO (1999) asserts, misleadingly, that *The indicator of new registered cases of disability has remained at practically the same level in Kazakhstan for the past 20 years and is one of the lowest among the countries of the European Region for which data are available (113.7 per 100,000 population*.

Officially, the USSR enjoyed full employment, and workers had a right to a pension in the event that they became disabled. Hence, data focused on workers, and prior to 1991 statistical form N7 showed disability incidence only among "all blue collar and white collar workers" and ignored those not in this category. However, omission from Form N7 did not mean that a person was not defined as disabled. This peculiarity in the disability incidence statistics becomes apparent from the 1980s, since for 1980-1989 the sum of the number of people determined to be (a) disabled and (b) not disabled did not equal the total number examined for disability determination.[25]

Table 3-1

Disability Incidence Data Specification by status of employment covered by government population statistics (Form N7) during 1980-2005

Period	Coverage *	*No. of Applications to Disability Determination*	No. of applicants determined as disabled	Including among:					No. of applicant s not determined as disabled
				Employed	Including:		Others	Un-employed	
					Blue & white collar workers (including those working in sovkhoz state farms)	Workers on collective farms (kolkhoz)			
1970-1985	no urban / rural division	r/ag			*V***	*V***	r/ag		*V*
1985-1990	no urban / rural division	r/ag			*V****	*V****	r/ag		*V*
1991-1996	Urban	*V*	*V*	*V*			r/ag		*V*
	Rural	*V*	*V*	*V*			r/ag		*V*
Since 1997	Urban	*V*	*V*	*V*				*V*	*V*
	Rural	*V*	*V*	*V*				*V*	*V*

V - registered data;
r/ag - can be derived as a residual aggregated number;
* - data are recorded by regions and aggregated to the county (*raion*) level
** - including working retirees
*** - excluding working retirees

More information on this group can be obtained by examining Statistical Form N94. This form tracks both the total number of recipients of disability pensions and allowances, and also the number who were assigned disability pensions or allowances during the current year. This enables one to derive an alternative estimate of disability incidence, and hence to check Form N7 in the event of suspicious numbers (and *vice-versa*), and turns out to be especially useful in estimating disability incidence among children. Taken together, the statistics presented in Forms

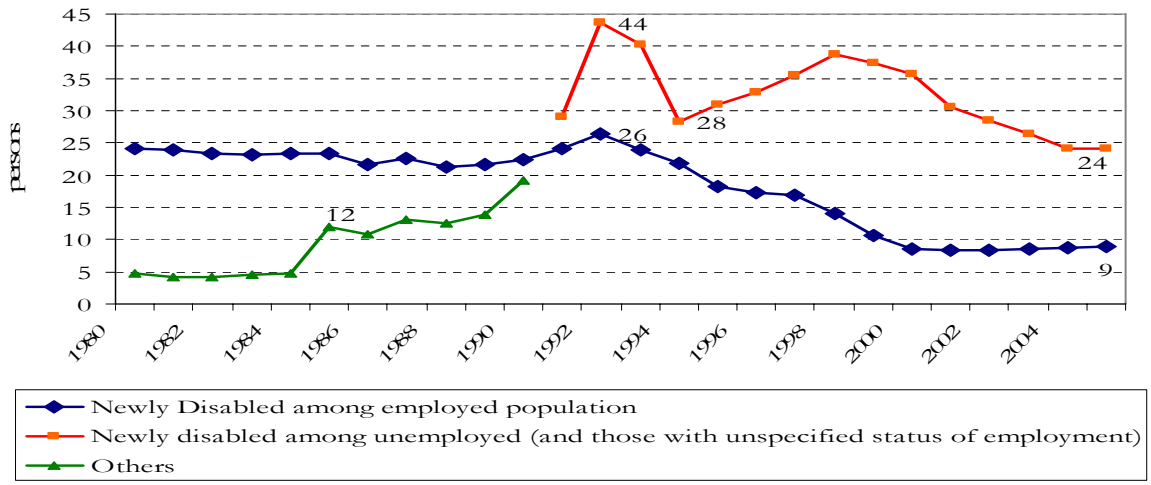
[25] The number of people who comprise this hidden contingent (X) is then calculated residually: $X = Ex - N_{ND} - N_D$, where Ex is the number of applications for disability determination, N_{ND} is the number of applicants not determined to be disabled, and N_D is the number of applicants determined to be disabled.

N7 and N94-RIK indicate that the "hidden" category contained those who were disabled from childhood, military disabled, and nonworking retirees who receive retirement pensions but became disabled.

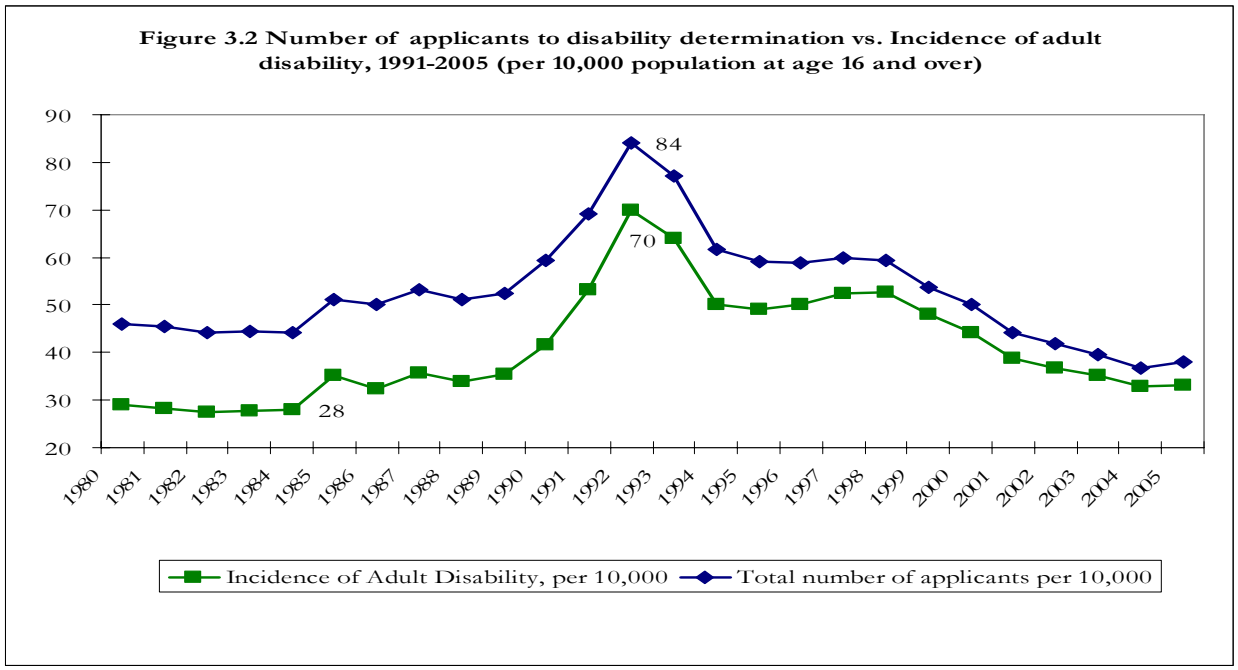
Vasin et al. (1999) refers to this group as "Others," when he explains fluctuations in Russian disability incidence in 1975 and in 1985 by their direct link to the various Anniversaries of Victory in World War II. In particular, he finds that the momentous increase in the number of disabled in 1975 in Russia was the result of the Soviet Government's *Order on the 30th Anniversary of Victory in WW II* to increase significantly the level of pension provision for different categories of disabled, including those disabled in the war. But, since such an increase in the extent of disability could damage the picture of socialist prosperity on the eve of the 40th Anniversary of Victory in WWII, the government decided to adjust the number by reclassifying disabled persons who were blue and white collar workers, namely working pensioners (that is, those working who also received some disability payments) as "Other disabled." Such a change in the disability recording system did not affect the total number of the newly disabled, but according to Vasin's guess it helped offset the increase in disability incidence among blue and white collar workers in 1985-1989, as stipulated by USSR *Government Decree N812*, issued in 1985, and which allowed a new group of WW II veterans to qualify for disabled status. [26]

[26] See: Central Committee of the Communist Party of the Soviet Union and the Council of Ministers of the USSR, Decree No. 812 of July 26, 1984, *On measures for the further improvement of the material and daily life conditions of participants in WWII and families of those killed during the war.* (Постановление ЦК КПСС и Совета Министров СССР от 26.07.84г. N812 *О мерах по дальнейшему улучшению материально-бытовых условий участников Отечественной войны и семей погибших военнослужащих.*)

Figure 3.1 Number of newly adult disabled by main category, 1980-2005 (per 10,000 population at age 16 and over)



Unfortunately, as we have been unable to obtain data prior to 1980, it is not possible to confirm whether the 1975 effect outlined by Vasin et al. (1999) for Russia also occurred in Kazakhstan. However, on the basis of our historical disability series from 1980 onward (**Figures 3.1 and 3.2**), it would appear that the result of transferring the disabled at retirement age from category "blue and white collar workers" to the category of "Others" in 1984 showed up one year later in Kazakhstan than in Russia. This lag was most likely attributed to the younger population age structure in Kazakhstan relative to Russia. However, there is no doubt that the reason behind the sharp increase in total number of applications for disability determination and incidence of disability in 1985 in Kazakhstan ultimately reflected the changes announced by USSR Government Decree No. 812, as Vasin et al. found to be the case in Russia.



The significant increase in disability incidence in Kazakhstan in the late 1980's coincided with Soviet economic crisis, the first stage of which lasted from April 1985 to early 1990, and which Filatochev and Bradshaw (1992) argue reflected "structural inefficiencies in the productive sector which led to a form of cost-push inflation. During this stage the inflation rate increased from just under 5% in 1985 to almost 20% by 1990. The second stage started in 1990 …..characterized by chronic imbalances in the central state budget. In this second stage the inflation rate has increased slightly less than 20% to 200% in just under two years, thereby establishing the conditions of hyperinflation". As a consequence of these inflationary processes, real incomes of the Soviet population dropped 19% between 1990:II and 1991:II (Filatochev and Bradshaw, 1992). The worsening economic situation forced the USSR and Kazakh SSR Governments to implement the following measures to minimize deterioration in living standard of soviet population and particularly most vulnerable people:

- Enactment of an August 1989 USSR law according which all type of disability pensions and government disability childhood allowances were significantly increased from October 1, 1989 and January 1990, correspondingly.[27]

[27] USSR law No. 313-1 (August 1, 1989), "On urgent measures on pension provision and provision of social services to the population" (О неотложных мерах по улучшению пенсионного обеспечения и социального обслуживания населения).

- Enactment of the 1990 USSR law "On pension provision in the USSR" that stated: "The Law ensures social protection of pensioners by regularly adjusting the size of pension according with change of the cost of living and the improvements of economic conditions." [28]
- A decree from September 1990 easing disability requirements for all WWII veterans. [29]
- Enactment of the 1991 RK law "On social protection for disabled persons in the Kazakhs SSR" (ref. fn. 10) that defines state policy toward disabled Kazakhstani citizens and guarantees the creation of social and economic, legal and organizational conditions for providing equal opportunities in daily life activities of disabled people. This law declared a wide range of opportunities for the disabled, ranging from free access to social infrastructure to individual rehabilitation programs to access to education and professional training. The most critical feature of this law consisted of many non-monetary benefits, including a fifty percent discount on http://www.multitran.ru/c/m.exe?t=229763_2_1public utilities, free intra-city public transportation, and the entitlement of the right to privatize (transferring from public to individual ownership) housing occupied by disabled people private free of charge.
- Enactment of the 1991 Kazakh SSR law on income indexation in response to CPI increases. [30] According to this law, all real income losses by those receiving state transfers, including all disability categories, were to be compensated. Sources of compensation included the USSR Pension Fund, USSR Social Insurance Fund, and other special funds directed by a special-purpose designation from the state budgets of the USSR and Kazakh SSR.

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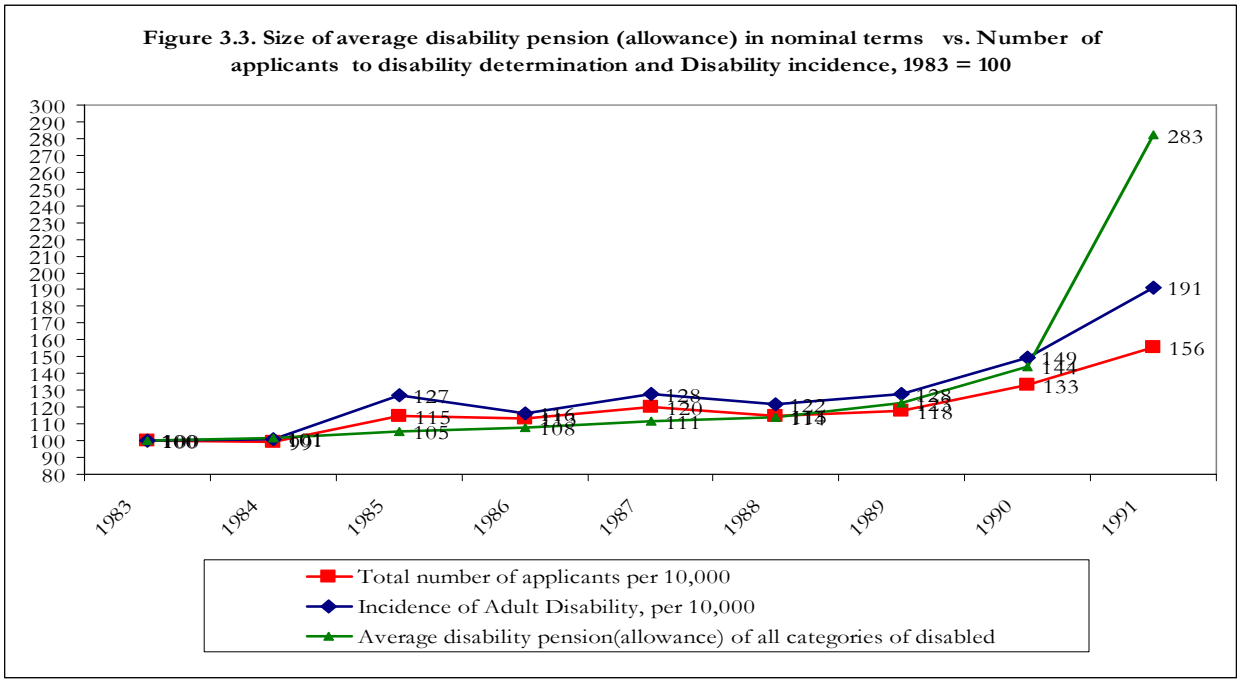
[28] USSR law (May 15, 1990), "On pension guarantees to citizens of the USSR " (О пенсионном обеспечении граждан в СССР).

[29] Council of Ministers of the USSR, Decree no. 927 (September 14, 1990), *Concerning the organization of the re-attestation by medical-labor commissions of participants of war and other military actions, and concerning the order of establishing disability designation due to wounds, contusions, or disfigurement, received on the front or during other military actions* (Об организации переосвидетельствования во врачебно-трудовых комиссиях участников воины и других боевых деиствиях и порядке установления причиннои связи инвалидности с ранением, контузией или увечьем, полученным на фронте или во время других боевых деиствий).

[30] Kazakh SSR law No. 638-XII (June 5, 1991), "On Pecuniary Income Indexation with adjustment to consumer prices increase" (Об индексации денежных доходов населения с учетом роста цен на потребительские товары и услуги).



How did the above-mentioned laws affect the gradual increase in demand for disability benefits? This question can be answered by examining **Figure 3.3.** Initially, let us ignore the period 1983-1988, where the two to three percent annual increases in average disability pensions and allowances (ADP&A) were consistent with the growth rates of disability applications and incidence estimates. Considering the following two years, note that the 8% and 17% increase in ADP&A in 1989-1990 initiated by 1989 USSR law led to commensurate rises in the number of applicants for disability determination (13%) and estimated disability incidence (17%). As for the upsurge of disability incidence in 1991, it is apparent that this increase is a cumulative result of all legislative measures listed above. At this point we should note that the real disability pensions of all categories of disabled in 1991 rose only by 3% relative to 1990, and had fallen approximately 20% from its 1988 level.

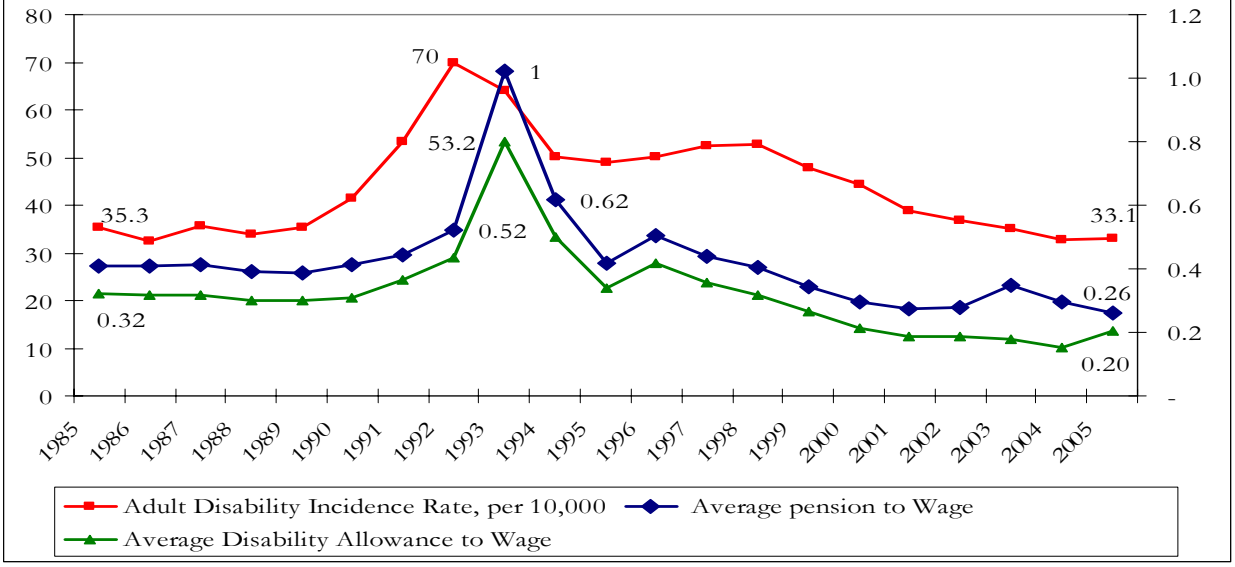
The 1992 spike in disability incidence in all categories of disabled (Figure 3.2) was caused by accumulated or, more accurately, postponed disability. “Postponed disability” refers to demand for social benefits that is absent in stable socio-economic situations, but which suddenly emerges during crises. This phenomenon was identified by Vasin *et al.* (1999) for Russia during

the Soviet era and transition period, and which showed up in Kazakhstan as well due to the same reasons and same period of time:

- During the 1980s, people of the 2nd and 1st disability groups were legally prohibited from working. Since some of these people were in fact able to work, and could earn higher salaries (including in-kind benefits) than disability payments, the ban served as a constraining factor to formally recorded disability. With the economic crash of the early 1990s and deterioration of earnings potential, many such people would have registered as disabled, pushing up the apparent disability incidence.
- While there was liberal coverage and structure of pensions and benefits for the disabled, the amounts of those pensions remained small and were less than ordinary full work-service old-age pensions after retirement. In the stable socio-economic situation of the USSR, and with virtually no inflation, in-kind or non-cash benefits and discounts did not make up a substantial portion of a pensioner's consumer goods basket. Thus, a disabled person who was also eligible for a full-service pension did not have an incentive to register as disabled during the Soviet era. However, once again the incentives shifted with the collapse of the USSR.

In the early 1990s, the economic crisis in Russia and Kazakhstan made all possible sources of income desirable for all potentially disabled persons, forcing them to apply for the disability status ignored before. Indeed, the "set of benefits and compensations provided by Government in the form of free medical drugs, free bus transportation, *et c*., gave a chance for the low-income disabled and, particularly, for retirees and the unemployed to maintain their standard of living" (Vasin *et al.,* 1999) during the economic decline. To be precise, not only the disabled but indeed all vulnerable people were high priorities for assistance from (initially) the USSR and then Kazakhstan Governments during the crisis.

Figure 3.4 Adult disability incidence vs. the ratios of average pension and disability pension(allowance) to the nationwide average wage, 1985-2005

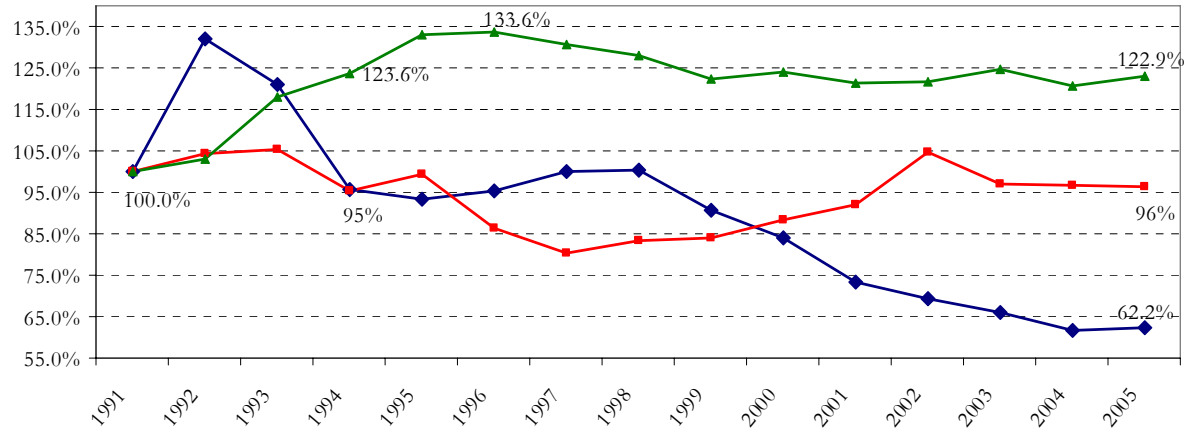


This commitment to provide elderly people, disabled and survivors with adequate labor or social pensions, embodied in the previously named legislative documents, led to the massive early retirement and increase of disability prevalence. The consequences of such emergency policy (described in Seitenova and Becker, 2003) ultimately resulted in a 25% increase in the number of pension beneficiaries between 1988 and 1993. Coupled with a rising pension system dependency rate, this growth contributed to an increase in government pension expenditures, which rose from 5.45% of GDP in 1989 to 7.87% in 1996. The Kazakhstan government's costly efforts http://www.multitran.ru/c/m.exe?t=2091358_2_1to offset the negative effects of transition and "shock therapy" on the standard of living of majority of its population is reflected in the facts that the highest disability incidence and the lowest gaps between the retirement/disability pensions (allowance) and the nationwide average wage occurred during the hyperinflation period of 1992-1993 (**Figure 3.4**). Once these gaps began to fall, disability incidence also began to decrease. The downward disability trend emerged immediately after the Articles 35-36 and 39-41 of the 1991 law On Social Protection for Disabled Persons of the Kazakh SSR were frozen in from January 1994 until April 1997 by Presidential Edict N1652.[31] The only parts of these articles frozen were those regarding the provision of free or discounted services, purchase of

[31] Edict N1652 of 12 April 1994 of President of Republic of Kazakhstan " "On making amendments to the Edict N1529 of 27 January 1994 of Republic of Kazakhstan " On the state budget for 1994""

cars, http://www.multitran.ru/c/m.exe?t=229763_2_1public utilities, public transportation, and telephone installation, and free radio use. These privileges (especially in light of declining value of disability pensions due to worsening economic conditions) had significantly eased the life of vulnerable population during the first two years of hyperinflation period; *i.e.*, 1992-1993. Thus, there is good reason to suppose that decline of disability incidence in 1994 occurred because cancellation all these privileges. On the other hand, the facts that during the second half of 1994 the Articles 35-36 and 39-41 were unfrozen, again restoring benefits, and that increased numbers of additional non-monetary and transfer payments to pensioners and disabled were assigned is not consistent with our assumption.[32] Taking into account that 1994 was the year with the highest average inflation rate (approximately 1900%) and highest adult mortality rate (13.2 per 100,000) from the time of price liberalization, our conclusion is that the phenomenon of "postponed" disability diminished when the mortality surge (with accompanying disease and disability incidence) declined (**see Figure 3.5**).

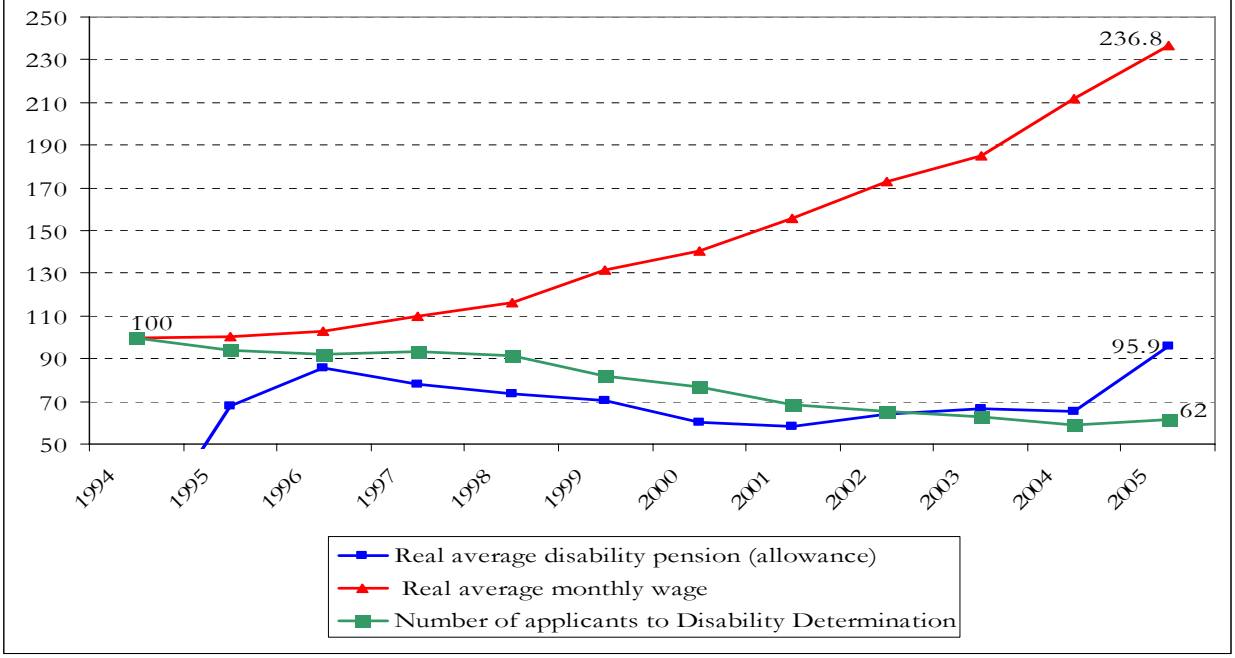
Figure 3.5 Disability Incidence vs. Disease Incidence&Crude Death Rate, 1991=100 (per 10,000 population)



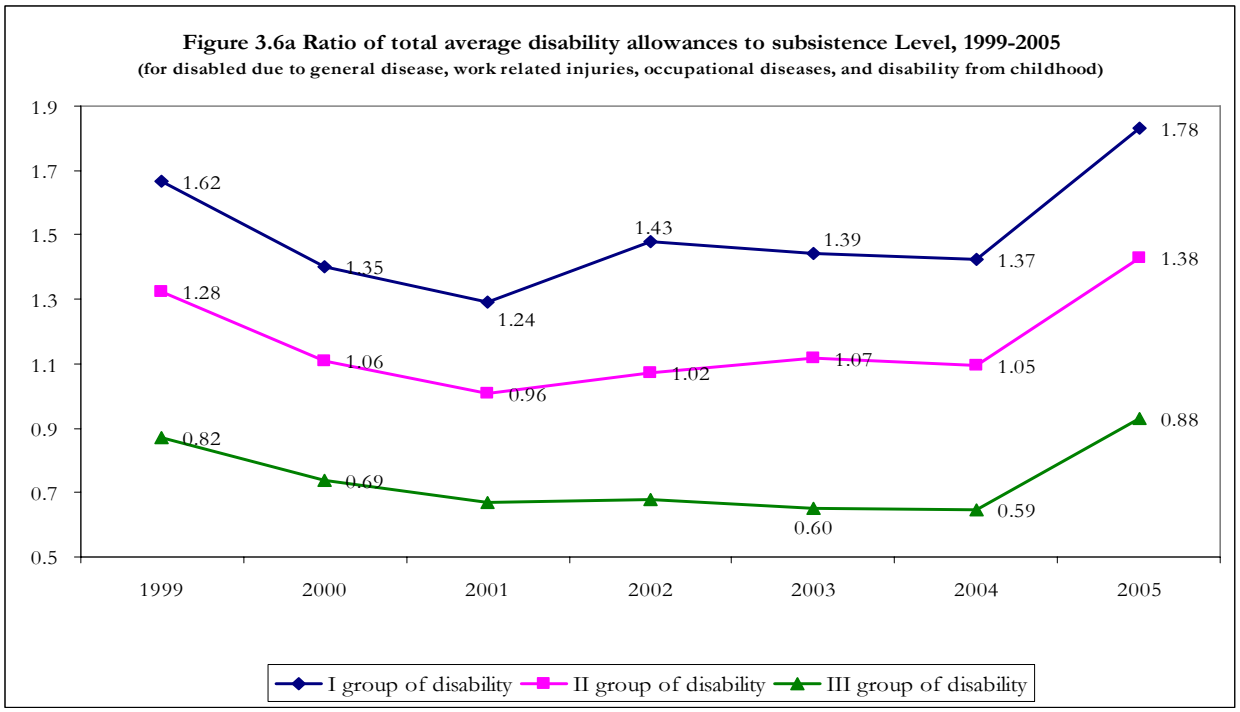
[32] In 1994 the Government of Kazakhstan, in connection with the rise in food prices, increased transfer payments to pensioners receiving relatively low payments, including disabled persons. These increases, relative to the legally established minimum labor payment norms, were 60%, 85%, and 115%, from February 1, July 1, and October 1, respectively.

In the following sections, we explain the reasons of the divergent trends of mortality, disease and disability incidence of adult population in Kazakhstan. The findings of Section 5 lead us to believe that it would be mistaken to interpret **Figure 3.6** below as reflecting the existence of low incentives for disability determination in Kazakhstan starting from 1995, the year when inflation decreased to 172% from 1900% in the previous year. This statement is based also on the fact that the state disability allowance (SDA) is not the sole social security benefit from the set of monetary and non-monetary benefits disabled people receive in Kazakhstan. The second category of monetary payments made by Republican and local budgets includes a Special State Allowance (SSA), introduced on April 1, 1999 (in accordance with RK Law № 365-1 of April 5, 1999) in lieu of previous payments from local government budgets to pay for communal services, fuel, and dwelling maintenance. SSA recipients include World War II veterans and disabled, persons who enjoy similar benefits and guarantees, families of deceased veterans, disabled persons, and families with many children. Additional SSA average monthly public social payments amounted approximately to 20%, 28% and 18% of state disability social allowance for adult disabled of the first, second, and third disability groups, respectively.

Figure 3.6 Number of applicants to disability determination vs. Average real wage & disability pension (allowance), 1994 = 100



As we can see from **Figure 3.6a**, these supplements together with GSA provide severely disabled adults (I and II) with a certain level of protection from poverty. Note that Fig. 3.6a depicts only allowances assigned to the disabled adult population due to general disease, work-related injuries and occupational diseases, and disability from childhood. Other categories of adult disabled (4.7% of the total) are assigned a higher amount of GSA according to the 1997 law "On State Social Disability, Survivorship and Old-Age Allowances in the Republic of Kazakhstan." [33]



Obviously, the fact that total state allowances (SDA+SSA) paid to the moderately disabled (group III) fell 20% to 40% below the estimated subsistence level leaves an unfavorable impression of Kazakhstani social policy toward the less severely disabled. However, it is still not possible to argue with certainty that these small payments could decrease demand for state disability allowance among the moderately disabled. Most critically, according the both 1991 and 2005 RK disability laws there were no serious employment restrictions on disabled people with any group of disability. On the contrary, Article 29 of the 1991 disability law, which was in

[33]Republic of Kazakhstan Law № 126-I, 1997 (June 19), *On State Social Disability, Survivorship and Old-Age Allowances in the Republic of Kazakhstan.*

effect until 2005, states: “For the purpose of realization of innovative and industrial abilities of the disabled, and in compliance with individual programs of rehabilitation, the right to work is provided in enterprises, establishments, and organizations with standard working conditions; in specialized enterprises, manufactories, and in sections specially designed to utilize disabled persons; and also the right to be engaged in individual and other labor activity which is not forbidden by the law” (see footnote 11).

Moreover, according to Article 30 of the 1991 disability law, local authorities together with non-governmental organizations supporting disabled people were directed to establish specifications for reserving in enterprises and other workplaces (presumably, including public bodies) with 20 or more employees, at least five percent of all positions for disabled persons. Of course, these and many other articles of the old disability law had mainly a declarative character rather than an actual impact, since in reality “new workplaces for disabled are not opened. A firm’s management may use any excuse to discharge working disabled due to high supply of able-bodied population in the labor market” (Imanaliev, 2003). Nonetheless, eligibility for disability payments did not preclude one from working, and therefore is best regarded as a supplemental payment.

Nor does low level of disability payment explain the low application for disability determination in 1999-2004, because the share of newly disabled from the unemployed and those with unspecified status of employment increased from 63% of total adult disabled from 1995 to 81% in 2000, and then decreased slightly to 73% and 74% in 2004 and 2005, respectively. The vast majority of working-age adults receiving disability payments during this period was thus self-employed or unemployed, and would have had no incentive to give up any additional income. Thus, the concurrent trends of real disability pension and disability incidence in Kazakhstan starting from 1995 offer a misleading picture. The real reasons for decreasing disability incidence during in past decade require further investigation and are discussed in the following section.

3.2 A few thoughts on disability incidence calculation

Since the post-Soviet era in the early 1990s, a new pattern of disability in Kazakhstan has emerged, with rising disability incidence among the unemployed. That the unemployed – or, at least those outside registered employment – came to comprise a growing share of the disabled is indisputable, since detailed examination of the data indicate that there was no unemployed population contingent hidden among the catch-all "Others" category used to obscure undesirable patterns in the Soviet era. However, we also note that the newly disabled persons' categories presented in Figure 3-1 are based on labor force classifications used before Kazakhstan accepted ILO standards in 1994. Hence, the disability registration commission (the Medical-Social Expert Commission, MSEC) recorded newly disabled people only as being "employed" or "unemployed," and did not divide individuals into the more commonly recognized categories of self-employed, hired labor, unemployed, or economically inactive.[34] As a result, the majority of newly disabled among the self-employed – who generally cannot provide employment certificates in Kazakhstan even today, and certainly could not in the early 1990s – are inaccurately registered as being "unemployed."

This incorrect definition also causes an inconsistency between the numerator (the number of new people determined to be disabled during a specified time period) and the denominator (the number of persons at risk of becoming disabled) in calculating the disability incidence rate (**Table 3.2**). The problem stems from unavailability of information on the numbers of disabled among hired laborers and the self-employed separately. As the MLSP does not disaggregate disability incidence categories, it is important to make allowance for the resulting inaccuracy. By including self-employed among the unemployed and dividing by the official number of unemployed, unemployed disability may be overstated by as much as 100%. We adjust the denominator to include both self-employed and economically inactive populations (excluding the inactive disabled) in order to make it consistent with MLSP's corresponding data, and thereby calculate disability incidence among the "unemployed and those with unspecified employment status."

[34] Economically inactive are defined as persons neither in employment nor unemployed. These include those who want a job but have not been seeking work in the last four weeks, those who want a job and are seeking work but not available to start, and those who do not want a job.

We face a similar misinterpretation problem with disability incidence rates among those in the "employed" category. While it is possible that some disabled self-employed have been put in that category, it is clear that these numbers are small even today. Therefore, including both hired laborers and self-employed in the disability incidence denominator leads to an underestimate of the incidence of disability among the employed population. This error is reduced when only hired workers are included in the denominator, giving us a disability incidence rate among hired workers.

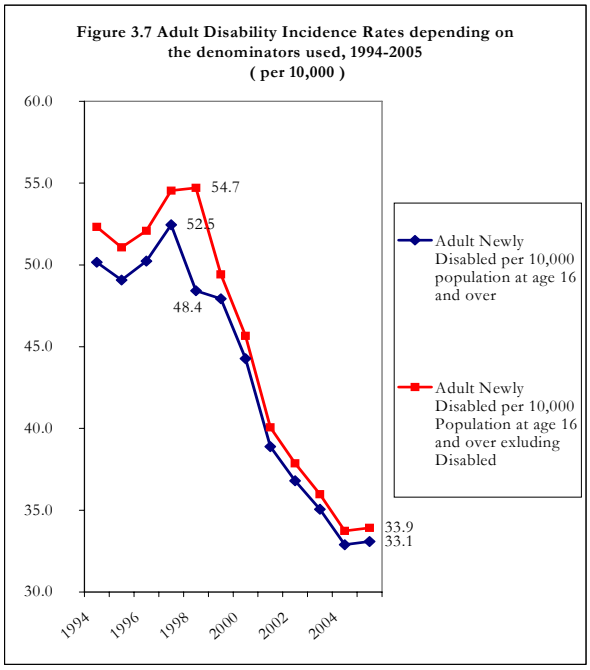


Figure 3.7 Adult Disability Incidence Rates depending on the denominators used, 1994-2005 (per 10,000)

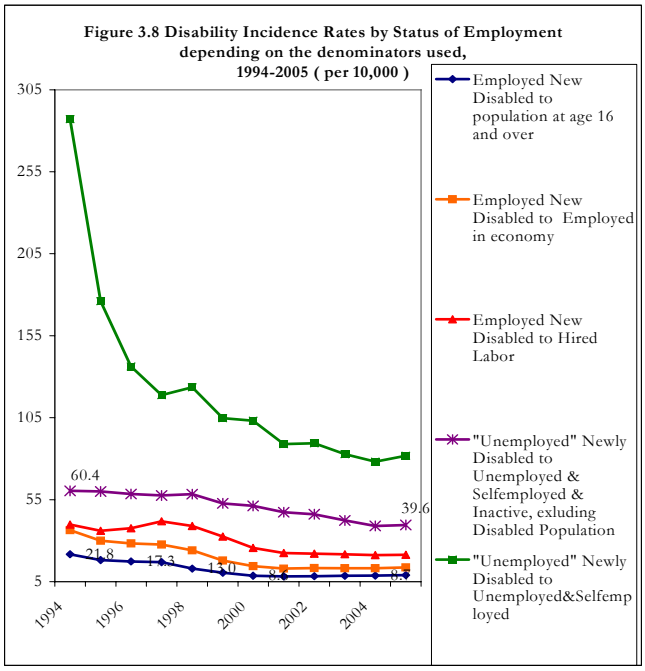


Figure 3.8 Disability Incidence Rates by Status of Employment depending on the denominators used, 1994-2005 (per 10,000)

Selecting correct denominators for calculating adult disability incidence deserves special attention, because as incidence rate trends vary according to which variable is used in the denominator. **Figures 3-7** and **3-8** show how disability incidence rates vary according to whether population or labor data are used. Population data produce the lowest disability incidence and it is commonly used to create a favorable picture or because labor data are unavailable.

As with labor force data, it is important to adjust disability incidence rates based on population data. Table 3-2 matches appropriate numerators and denominators. It also appears that a clearer picture of the population disability incidence can be obtained by subtracting the

disabled from total population in the denominator.[35] This distinction would be unimportant in a setting with stable population and disability incidence. This is not the case in Kazakhstan, especially in light of eligibility changes. The rapid rise in the disabled population makes the risk appear to decline more rapidly than it in fact does (Figure 3-7).

Table 3-2
Adult Disability Incidence: How the Denominator Matters

		Denominator						Comments regarding Numerator
		population at age 16 and over	population at age 16 and over disabled population	Employed in economy	Hired Labor	Unemployed + Self-Employed	Unemployed + Self-Employed + Inactive excluding disabled population	
Numerator	Number of newly disabled among whole adult population	slight under-estimate	Approximately right	X	X	X	X	
	Number of newly disabled among employed population	Large under-estimate	X	Under-estimate	Approxi-mately right	X	X	Few self-employed
	Number of newly disabled among un-employed population	Large under-estimate	X	X	X	Signifi-cant over-estimate	Approxi-mately right	Includes many self-employed and inactive persons

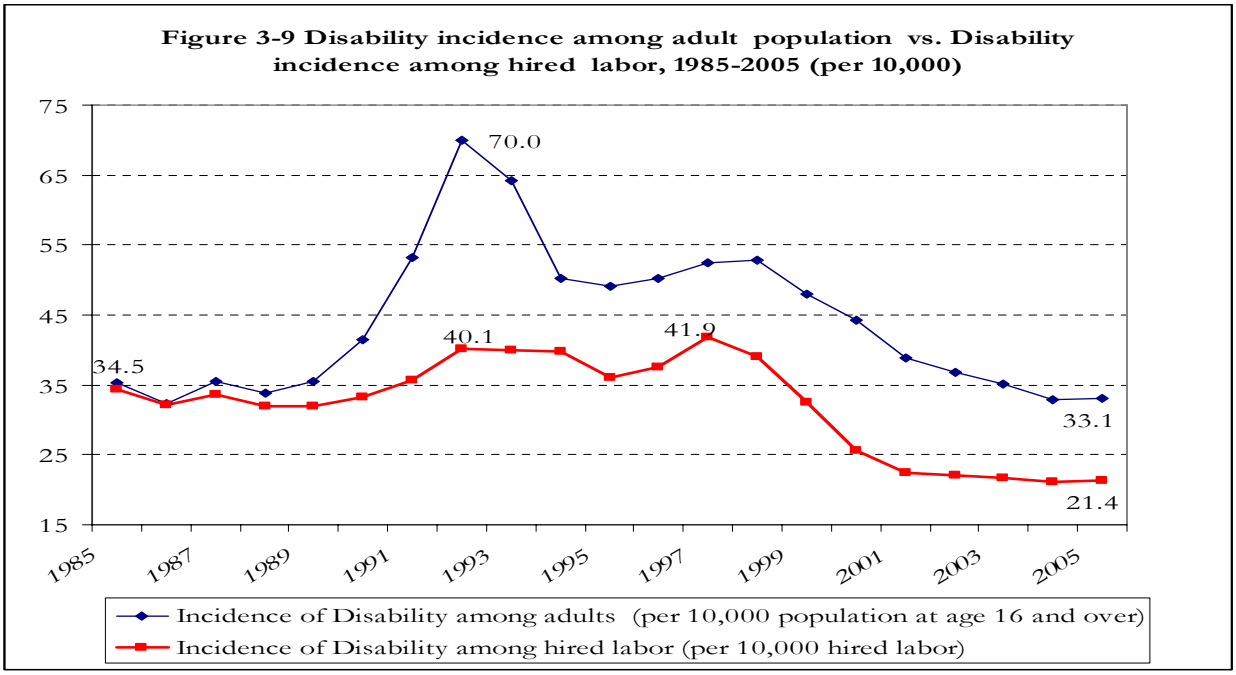
In summary, because it is impossible to disaggregate the number of disabled people among the employed population into detailed components (by sector or occupation, for both hired and self-employed labor), the available data allow us to calculate only the hired labor disability incidence rate and the disability incidence rate among the unemployed and those

[35] The rationale behind this suggestion is that those who were determined to be disabled before the new incidences occurred cannot be considered to be at risk of developing a disability. The illogic of including those previously disabled in the denominator becomes apparent if one were to ask why deceased persons are not included as well – the answer being that they are not at risk of becoming disabled.

whose employment status is unspecified, including self-employed and economically inactive persons. On a more positive note, it is possible to compare MLSP's reported data on disability incidence among the employed population to disability incidence among blue and white collar workers during the Soviet era. This is possible because "blue and white collar workers" during the Soviet era and hired labor in the post–Soviet era shared essential characteristics: they had full-time jobs, guaranteed benefits, and employee vacation rights.

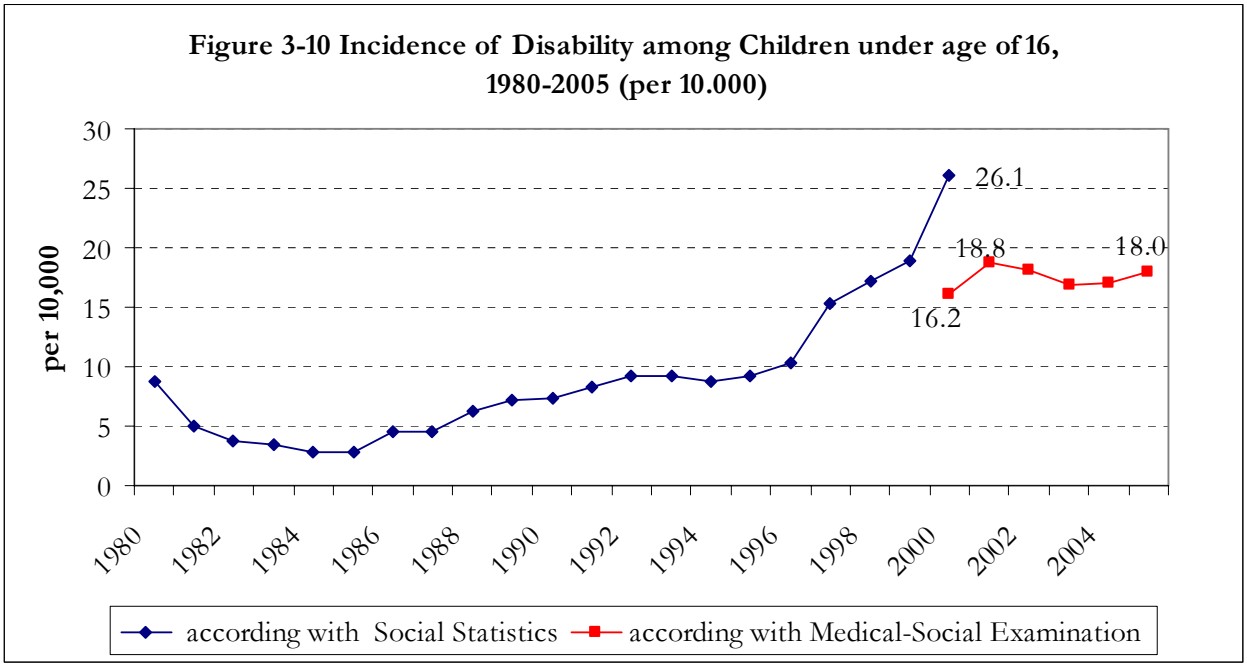
In light of the comparability problems discussed above, the longest (for the last 25 years) and most consistent series for the adult disability incidence in Kazakhstan are based on population data and the hired labor (**Figure 3-9**). These are the only series that allow us to compare Soviet and post-Soviet features of disability incidence and gain insights into whether there has been a trend in disability incidence for the working-age population.

Figure 3-9 Disability incidence among adult population vs. Disability incidence among hired labor, 1985-2005 (per 10,000)



The pattern suggested is one of gradual decline in overall adult disability during the 1980s, with an accelerating fall in 1986 (perhaps due to the onset of the anti-alcoholism campaign). Disability incidence then rises sharply in the early post-independence years, then plummets in 1993-95, and again in 1998-2001. Taken at face value, these data suggest that disability incidence in Kazakhstan today among regular employees is only one-third that of the 1992 peak, and also far below Soviet levels.

Before accepting this optimistic trend at face value, it is worth examining patterns for other age groups that should be highly correlated with adult disability. This examination is sobering. While calculating the trend in disability incidence among children aged 0-15 also requires patching together imperfectly consistent data, the pattern is clear (**Figure 3-10**). For infants and children, we observe an upward trend over a 15-year period from the mid-1980s to the end of the 1990s that then stabilized by 2005. The adult and child disability rates are juxtaposed in **Figure 3-11**, leading one to ask whether there is a long-run relationship between child and adult disability incidence. More specifically, it begs the question: Should the decrease in the ratio between adult-child disability incidence rates from seven in the early 1980s to two in the early 2000s be a subject of concern, or is there a reasonable explanation for this pattern? In short, it is possible that both curves reflect reality?



Our quick answer to this is "no." Furthermore, insofar as there is error, it is far more likely to be in the working-age disability rate than in the child disability rate. Children are also examined by a medical commission, but unlike adults, there is no variation in incentive over time to report or fail to report a disabling condition. The secular rise in child disability can be tied to deteriorating care at birth (and hence increases in birth trauma), and deteriorating medical care in the 1990s that may have led to greater long-term consequences of various injuries. It is possible

that the rise also reflects a decline in social ostracism toward the disabled, but this effect seems small: few families could have afforded to hide their disabled children from Soviet examiners, since doing so would forego rights to social benefit payments.

The alternative explanation is that adult disability has not sharply decreased, but rather that the incentive to report has declined. In Kazakhstan as elsewhere, those without well-paid, steady jobs are far more likely to seek disability status and, once disabled, to remain that way as long as permitted – or, until a good job comes along. Much of the rise in disability must have reflected the economic deterioration of the early 1990s along with increasingly liberal eligibility standards. The later decline then could reflect a tightening of eligibility standards, economic recovery, and decreased real benefits. Indeed, we anticipate that the situation today is one in which most of those who are self-employed or working in small businesses have no incentive to report disabilities.

Figure 3.11 Disability Incidence Rate : Children vs. Adult (per 10,000), 1980-2005

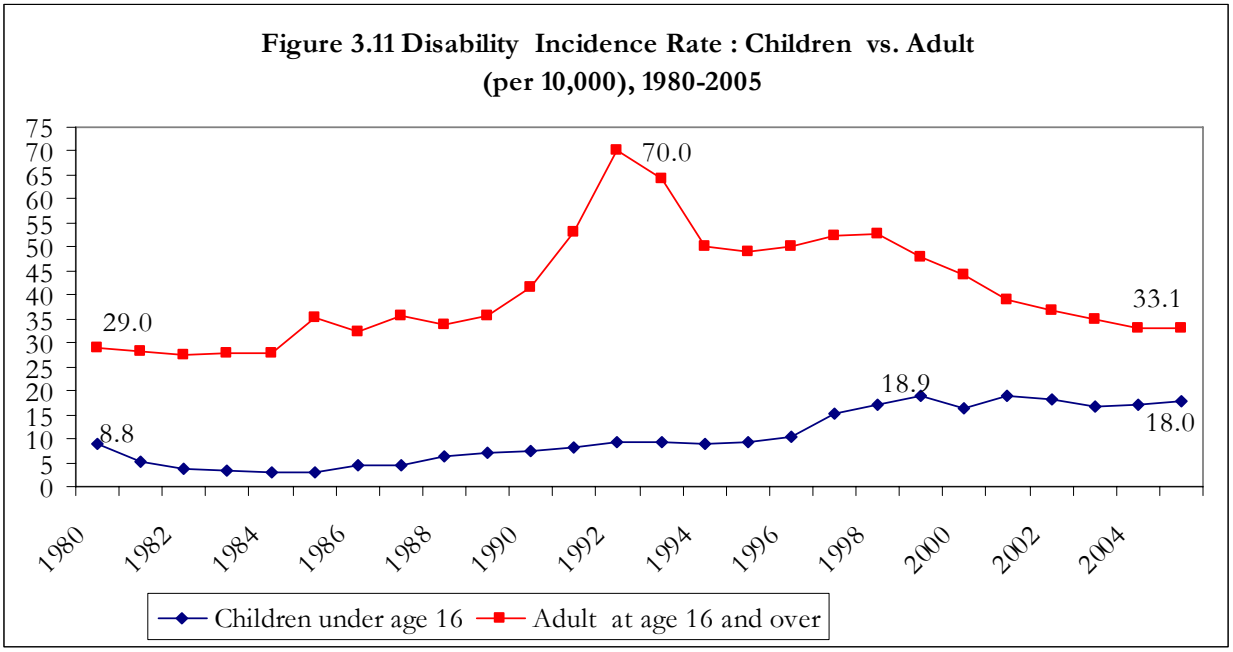
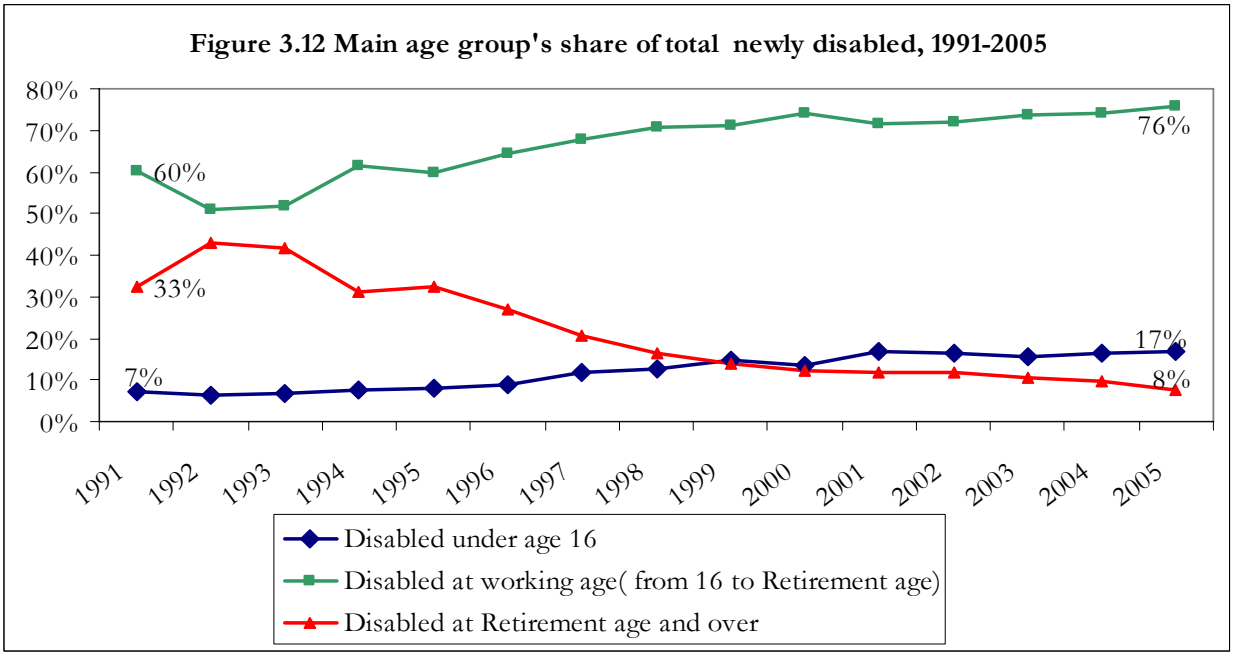


Figure 3.12 Main age group's share of total newly disabled, 1991-2005



Yet another important pattern of disability in Kazakhstan is the age structure of those newly disabled. **Figure 3-12** shows that the increasing trends of share of total disabled persons among children and the working-age population over the last decade in contrast to the retirement age population's decreasing disability share. This decrease in retirement-age disability in turn accounts for much of the secular decline in adult disability since 1992. However, the decline most likely is driven by population composition factors (a small wartime birth cohort has reduced the population share of the retired population from roughly 1997 through 2007), public policies that now make referral and identification of disabilities more difficult, and rising elderly mortality (**Figure 3.13-3.14**). [36]

[36] In particular, as UNDP (2005) notes, "*This trend is not caused by a reduction in the proportion of disabled older people, but by a reduction in the number of retirees referred by health institutions to register their disability according to the government decree of 24 August 2000* [that] *'any age-related changes are not sufficient to diagnose a disability.' "(authors comments:2004)*

Figure 3.13 Kazakhstan old age-specific mortality rates for male population, 1980-2005 (per 10,000)

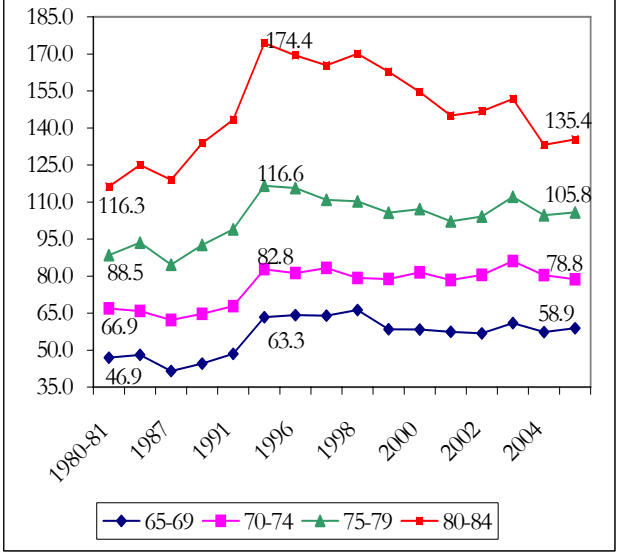
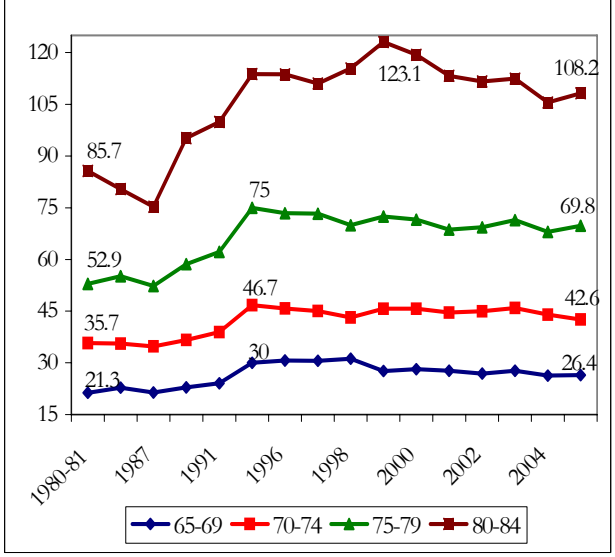


Figure 3.14 Kazakhstan old age-specific mortality rates for female population, 1980-2005 (per 10,000)



4 DISABILITY PREVALENCE AND RELATED FACTORS

At the beginning of 2006, the total number of disabled in Kazakhstan receiving state social disability allowances amounted to 405,000 people. This number represented 17.6% of all pensioners and recipients of state social allowances, and 2.7% of the national population (**Figure 4-1**). The disabled population rises to 3.1% disabled persons receiving other social benefits are added in, thereby including the small cohort of disabled World War II veterans and roughly one-third of retirees above retirement age whose official status was changed from “disabled” to “pensioners” after they reached retirement age. This level is not the highest among CIS countries, where the number of disabled as a percentage of the population varies from 0.8% in Turkmenistan to 4.1% in Ukraine (Figure 4-1). Indeed, Kazakhstan’s child disability prevalence is not high in comparison with many other Central and Eastern Europe, CIS and Baltic (CEE/CIS) countries (**Figure 4-2**). As there is no disability estimation for Kazakhstan based on a census or household survey, we cannot estimate the size of the disabled population that is not covered by the official statistics. Broadly, though, we believe that the range of proportional rate

of disability (4 to 10%) estimated by Metts (2000) for Kazakhstan as a medium human development country is realistic.

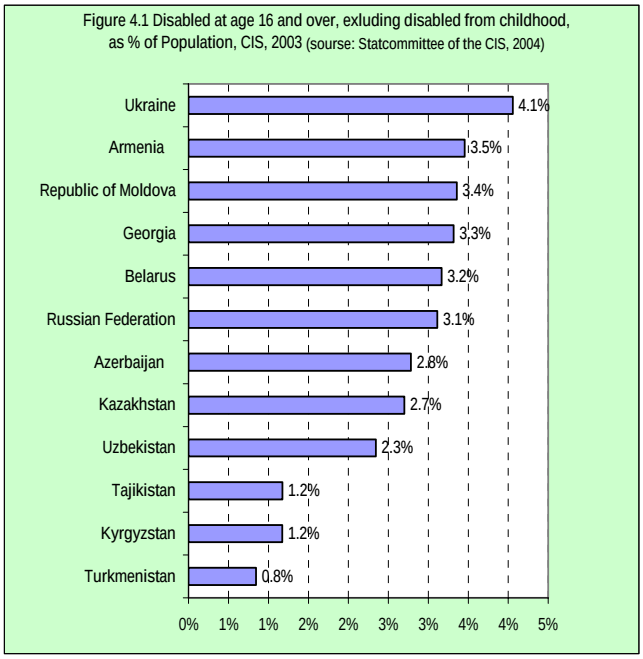


Figure 4.1 Disabled at age 16 and over, exluding disabled from childhood, as % of Population, CIS, 2003 (sourse: Statcommittee of the CIS, 2004)

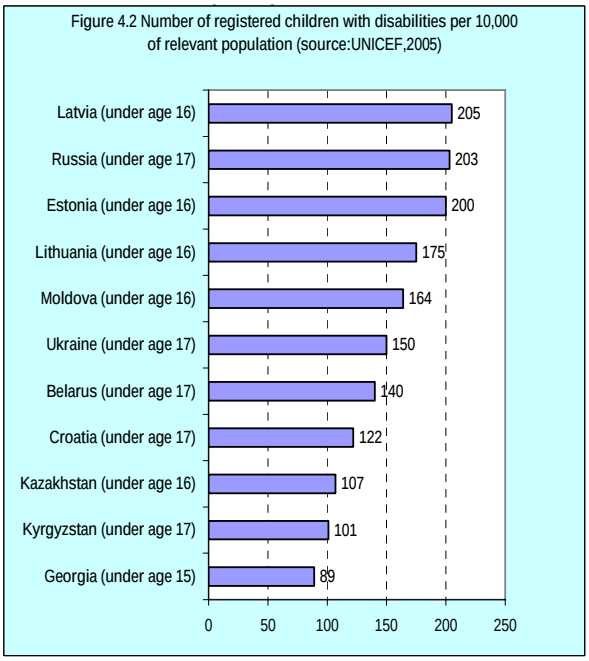


Figure 4.2 Number of registered children with disabilities per 10,000 of relevant population (source:UNICEF,2005)

Table 4.1 presents the distribution of disabled persons by the main causes of disability, according to the disability classification inherited from the Soviet Union. Comparing the structures in 2005 and 1990, the last year of the USSR, it is impossible to not notice some alarming patterns, especially a rise in the population disabled from childhood and in child disability. In 1990, these groups comprised 9.3% and 6.7% of the disabled population, respectively, while the 2005 shares were 23.8% and 11.8%. Thus, the disabled population has a declining share (though not number) of those disabled due to general diseases, which decreased from 69% in 1990 to 57% in 2005. More striking still, the proportion disabled due to work-related injuries and occupational diseases declined from 9% to 3% during this period. Rather than reflecting dramatic occupational safety improvements, this decline reflects both formal sector shrinking and artificial understatement of work-related incidents due to enterprises' unwillingness to report accidents in the post-Soviet environment. By law, materials from investigation of a workplace accident must be stored for 45 years (!) at the enterprise where an accident has been recorded. Hence, firms that report an accident run a nearly indefinite risk that current or former employees may file claims. To avoid this possibility, enterprises prefer to provide temporary compensation or privileges to actually or potentially harmed employees,

rather than reporting an incident. The enactment of Obligatory Social Insurance and Employers' Obligatory Insurance laws in 2005 should lead to an increase in reporting accuracy, and hence in the numbers of disabled due to work-related injuries and occupational diseases, although there does not appear to have had an immediate effect.

Table 4.1
Table Distribution of Disabled by Category, 2005 vs. 1990

	1990		2005		2005 as % of 1990
	thousand	%	thousand	%	
Total Disabled	299.1	100.0%	404.8	100.0%	135.3%
Including:					
due to general disease	206.1	68.9%	230.4	56.9%	111.8%
Disabled due to work-related injuries and occupational diseases	26.6	8.9%	12.1	3.0%	45.6%
Disabled children under age 16	19.9	6.7%	47.6	11.8%	239.1%
Disabled from childhood	27.7	9.3%	96.4	23.8%	348.1%
Others	18.8	6.2%	18.2	4.5%	96.8%

The proportion of disabled due to "other" causes of disability from the beginning of the 1990s to the present has fallen from 6.2% to 4.5%. Prior to the 1998 pension reform, this group included those who incurred diseases and injuries during military service; the category now includes new entrants due to causes relating to (a) radiation exposure in the Semipalatinsk nuclear polygon, (b) efforts to eliminate radiation from the Chernobyl disaster, and (c) ecological calamities that have been identified since 1992 and that are registered in Form N7. Unfortunately these sub-categories of disabled are not distinguished in stock (total numbers) data (Form 94-RIK) among the recipients of disability allowances, and hence it is impossible separate them among other categories of beneficiaries.

The standard disability classification by cause is satisfactory for the purpose of granting the appropriate type of state social allowances, but cannot be used for studying disability diagnoses based on medical models and for insurance purposes. Briefly, the classifications are too broad for such use, and do not indicate the extent loss of work capacity. This is true to some extent even for the more disaggregated categories. Consequently, it will be necessary to consider the primary disability by diagnosis on the basis of physicians' assessments, and to a precision that can be used for development of insurance tariffs when insuring losses of income caused due to disability.

Before examining the morbidity structure of disabled population in Kazakhstan, we briefly consider the dynamics of the disability prevalence rate. **Figure 4-3** provides a retrospective picture of the disabled as a percentage of the corresponding population share, and shows a secular increase in disability prevalence up to 2000. Thereafter, we observe a slowdown in the prevalence trend for disabled children and a decline for adults. A decline after 1992 appears in adult disability *incidence* trends **(**Figure 3.2), and it clearly is not mirrored by a decline in adult disability *prevalence*. Thus, changes in decremental factors like mortality, migration and rehabilitation among the disabled were negatively correlated with increment or incidence rate of disability, or were stable during the period. Since total population death rates slowly declined after 1997 or were stable, and since migration slower markedly after 1997, stable prevalence and declining incidence together imply decreasing rates of rehabilitation.

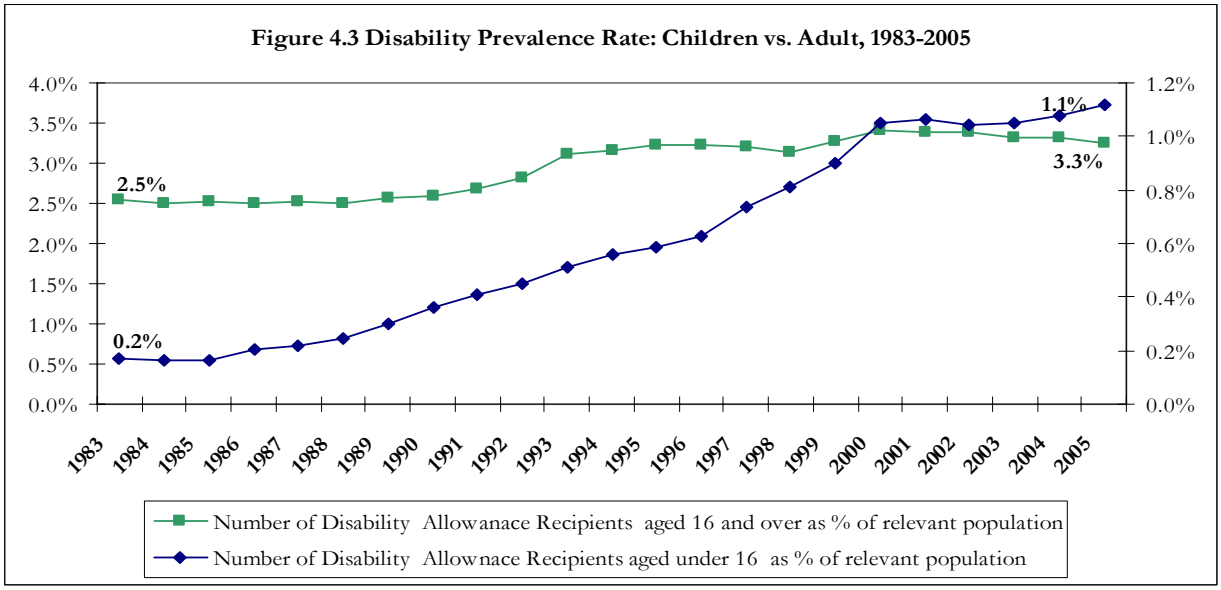
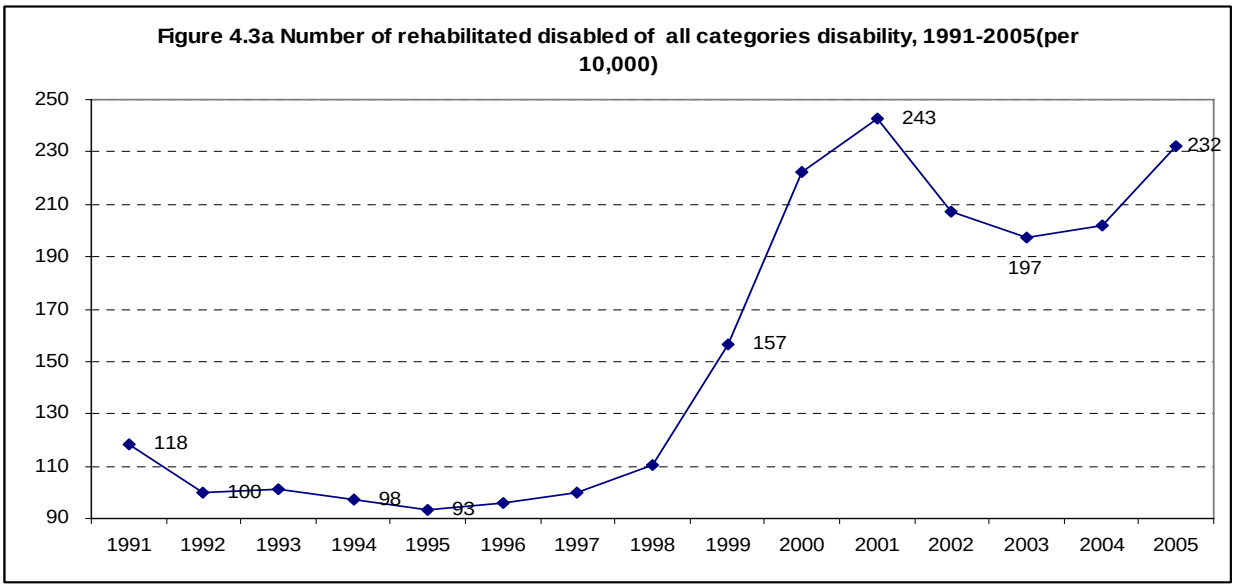
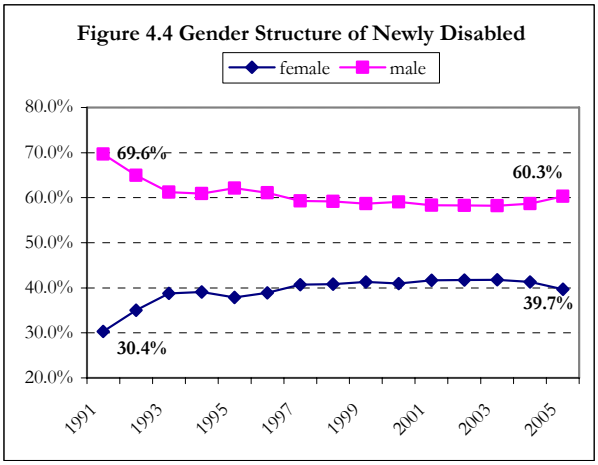
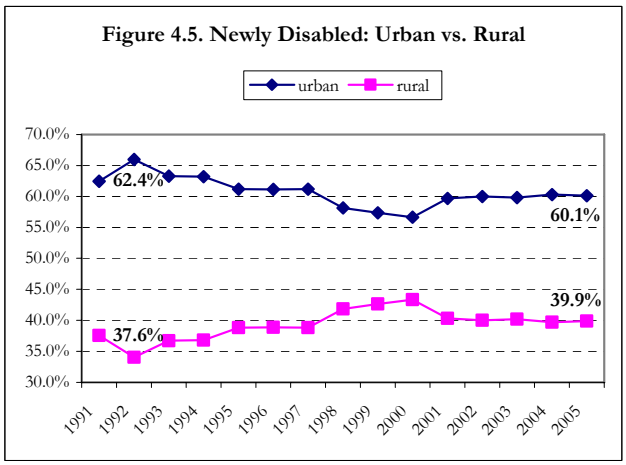


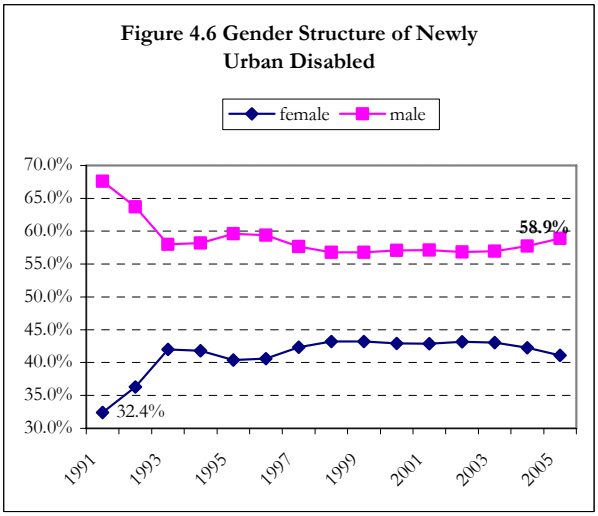
Figure 4.3a offers little in the way of clarification. Falling rehabilitation may help account for the continued upward trend in adult disability prevalence after incidence began to fall in 1994, through 1996, and again after 2001. However, declining or stable incidence from 1996-2001 and sharply rising rehabilitation should have helped clear the rolls, while Figure 3 indicates that prevalence actually drifted upward slightly. While this negative correlation warrants further investigation, we can only guess that it reflects increased migration or mortality among those disabled, in spite of the fact that for general population such a tendency is not observed.

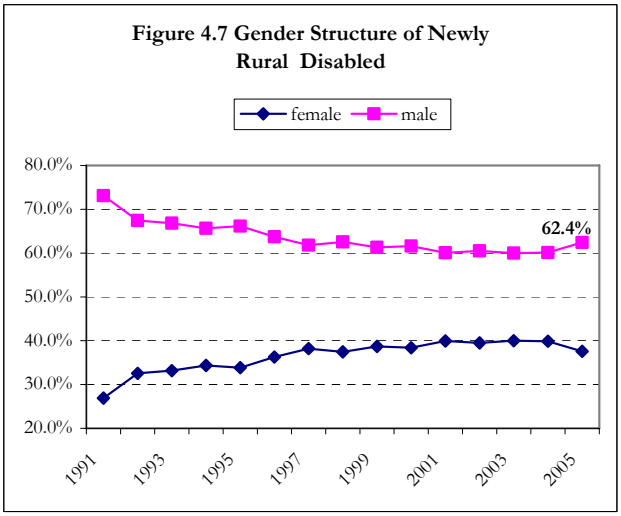


Decrement factors affecting disability prevalence rates depend in turn on age/gender/ morbidity and residence structure of the newly disabled population. In the light of the large gender difference in life expectancy at birth in Kazakhstan (with about an 11-year advantage for females), it is important to see how the proportion between male and female disabled has changed since independence**. Figures 4.4-4.7** show the following specific of newly disabled gender structure: in 1991 the share of females in the total number of the disabled did not exceed 35% in cities or 30% in rural areas. But, in the next two years it rose sharply, exceeding 40% level for urban and 35% level for rural disabled. These proportions were maintained until the middle of the current decade, and are now decreasing again. Unfortunately, disability statistics by gender are not available from the Soviet era, so we cannot determine the variance of the share of male disabled in 1980s and before. Nonetheless, it seems virtually certain that the 70% male share among the newly disabled in beginning of 1991 was the result of politically-motivated events described in section 3, and can be considered as statistical artifact. Note also that the gender patterns are similar in both urban and rural areas (Figures 4.6 and 4.7).

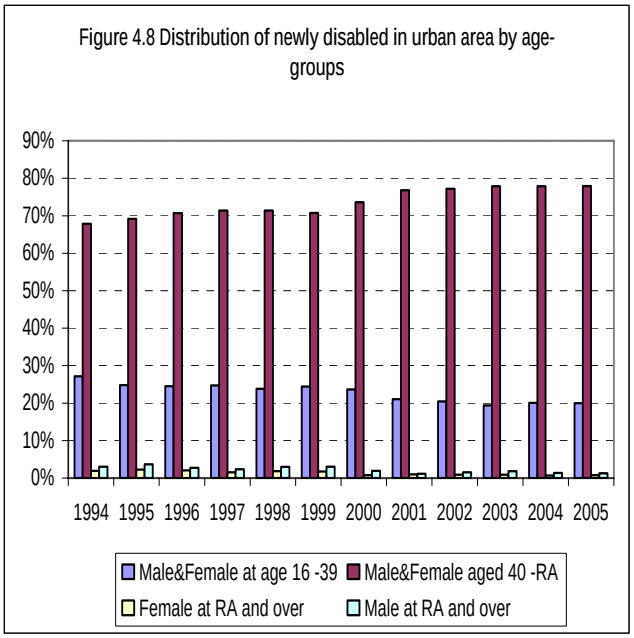


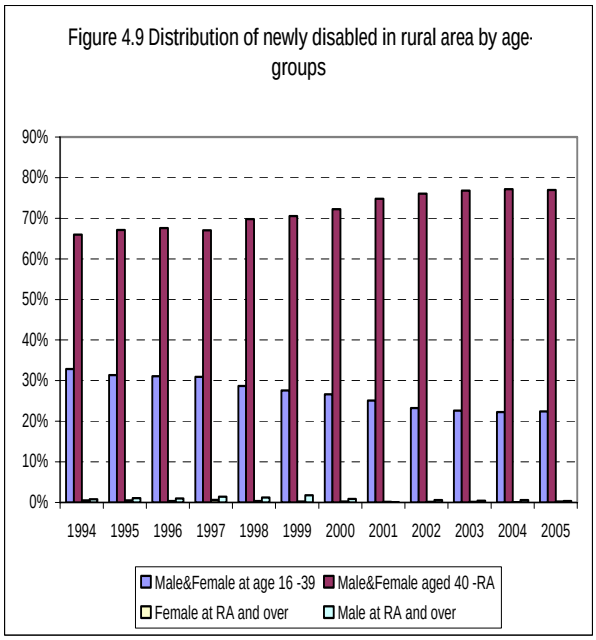






Age-specific patterns show that the male disability disadvantage is maintained across ages, and in particular is much higher at retirement age and over (**Figure 4.8-4.9**). With respect to the age-specific structure of newly disabled, a consistent historical series can be obtained only from 1994. These data continued practices inherited from USSR statistics: registration of only three age groups, and without disaggregation by gender. Yet, even with these limitations, it is apparent that the share of disabled at pre-retirement ages (that is, the older middle-aged) rose visibly in 2000 and has remained stable ever since. A corresponding decrease in share of the younger age group (16-39) is also observed. A second pattern is the reduction in share of oldest age group (retirement age and over), due to gradual increase at retirement age from 55 to 58 for women and from 60 to 63 for men during 1997-2001. Due to tiny size of the oldest age group, its influence on overall patterns of disability has been negligible (as the vast majority of persons at retirement age get regular Solidarity full service pensions, whether or not they are disabled).





The data in **Table 4.2** show the aggregate structure of the newly disabled of 2005 based on medical diagnoses by gender, employment status, and rural/urban location. For the male population, first place is occupied by those disabled due to diseases of the circulatory system (22.3% to 34.5%), while for the female disabled, neoplasms account for the highest proportion (16.4% to 31.7%). Second in importance for male disabled are traumas of all localizations (that is, injuries to all parts of the body, 16.7-25.6%), while for women, second in severity of risk is circulatory system disease (17% -20.3). Malignant neoplasms (9.6-15.3%) are the third most common cause of disability for men. The rank order of the top three causes for men is maintained regardless of status of employment or residence. For women, differences in importance begin after the top two causes. The third most common cause of disability for employed, urban women is traumas of all localizations (10.9%), while musculoskeletal impairments (9.4%) rank third for employed rural women. Eye diseases rank third for unemployed urban women, while mental disorders are third for unemployed rural women.

Table 4.2

Distribution of rural/urban disabled by type of diagnosis and gender, 2005

MALE									
	Employed					Unemployed			
	Urban		Rural			Urban		Rural	
	%	Rank	%	Rank		%	Rank	%	Rank
Diseases of the circulatory system	34.5	1	32.1	1	Diseases of the circulatory system	22.7	1	22.3	1
Injuries, poisoning and certain other consequences of external causes	23.4	2	25.6	2	Injuries, poisoning and certain other consequences of external causes	16.7	2	17.4	2
Neoplasms	15.3	3	13.5	3	Neoplasms	11.8	3	9.6	5
Diseases of the musculoskeletal system and connective tissue	6.1	4	6.4	4	tuberculosis (Infectious/parasitic)	11.6	4	9.4	6
tuberculosis (Infectious/parasitic)	4.4	5	5.3	6	Diseases of the eye and adnexa	8.9	5	10.3	3
Diseases of the eye and adnexa	3.3	6	5.8	5	Mental and behavioral disorders	8.4	6	10.2	4
Diseases of the nervous system	2.4	7	2.5	7	Diseases of the nervous system	4.5	7	3.4	8
Professional diseases and poisoning1	2.1	8	0.1	16	Diseases of the musculoskeletal system and connective tissue	4.0	8	4.4	7
Diseases of the digestive system	1.7	9	1.5	10	Endocrine, nutritional and metabolic diseases	2.7	9	3.0	9
Endocrine, nutritional and metabolic diseases	1.5	10	1.9	8	Diseases of the digestive system	2.2	10	1.7	11
Other	1.4	11	1.2	12	Diseases of the respiratory system	2.0	11	2.5	10
Diseases of the genitourinary system	1.4	12	1.5	11	Other	1.6	12	-	15
Diseases of the respiratory system	1.2	13	1.8	9	Diseases of the genitourinary system	1.4	13	1.5	13
Chernobyl-related ionising radiation	0.7	14	0.1	15	Diseases of the ear and mastoid process	1.0	14	1.6	12
Mental and behavioral disorders	0.4	15	0.4	13	Chernobyl-related ionising radiation	0.5	15	0.7	14
Diseases of the ear and mastoid process	0.1	16	0.3	14	Professional diseases and poisoning1	0.2	16	-	16
FEMALE									
	Employed					Unemployed			
	Urban		Rural			Urban		Rural	
	%	Rank	%	Rank		%	Rank	%	Rank
Neoplasms	31.7	1	26.2	1	Neoplasms	21.9	1	16.4	2
Diseases of the circulatory system	18.9	2	20.3	2	Diseases of the circulatory system	17.2	2	17.0	1
Injuries, poisoning and certain other consequences of external causes	10.9	3	8.7	4	Diseases of the eye and adnexa	9.4	3	10.4	4
Diseases of the musculoskeletal system and connective tissue	10.4	4	9.4	3	Mental and behavioral disorders	8.8	4	10.7	3
Diseases of the eye and adnexa	6.2	5	5.9	6	Diseases of the musculoskeletal system and connective tissue	7.7	5	7.4	6
tuberculosis (Infectious/parasitic)	4.7	6	8.3	5	Injuries, poisoning and certain other consequences of external causes	7.7	6	8.0	5
Endocrine, nutritional and metabolic diseases	4.1	7	5.2	7	tuberculosis (Infectious/parasitic)	6.3	7	7.2	7
Other	3.0	8	3.3	9	Endocrine, nutritional and metabolic diseases	6.1	8	5.2	8

Diseases of the nervous system	2.6	9	4.0	8	Diseases of the nervous system	4.0	9	3.8	10
Diseases of the genitourinary system	2.1	10	2.0	10	Other	3.4	10	4.1	9
Diseases of the respiratory system	1.7	11	1.8	12	Diseases of the respiratory system	2.2	11	2.6	11
Diseases of the digestive system	1.7	12	3.0	11	Diseases of the digestive system	2.0	12	2.4	13
Mental and behavioral disorders	1.0	13	1.2	13	Diseases of the genitourinary system	1.8	13	2.5	12
Diseases of the ear and mastoid process	0.7	14	0.5	14	Diseases of the ear and mastoid process	1.4	14	2.4	14
Professional diseases and poisoning1	0.5	15	-	15	Professional diseases and poisoning1	0.0	15	-	
Chernobyl-related ionising radiation	-	16	-	16	Chernobyl-related ionising radiation	-	16	-	

We can only speculate as to why mental and behavioral disorder is one of the leading causes of disability among unemployed population, especially in rural areas, while among the employed population these causes rank near the bottom (13-15) both for men and women, regardless of residence. Given limited employee protection, it is likely that many of those with severe mental disorders are simply fired, while those with less severe disorders take measures to disguise their problems, if self-recognized, and in any event do not seek medical assistance. More surprising is that one of the greatest risks among the unemployed population is diseases of the eye. The 5th to 6th rank of eye diseases among those employed is also striking, especially inasmuch as that, among all causes of disability in the United States, eye diseases do not currently even rank among the eight reported diagnostic groups published annually by the Social Security Administration (2005). Nor were eye diseases important in the USA some 20 to 35 years ago, when the distribution of disabled by diagnostic groups was more similar to Kazakhstan's current disability structure.[37] However, Kazakhstan is not alone in its disability patterns. The importance of eye diseases in Russia and Moldova is also considerable, and likely is as well in other CIS countries, although in some republics such as Armenia, it appears to be lumped into the category of "others" (**Table 4.3**). We anticipate that the importance of eye diseases among the disabled may reflect a high incidence of untreated diabetes, which can cause blindness (Mont, 2007). Moreover, Kocur and Resnikoff (2002) note that "Cataract is still a cause of avoidable blindness in the elderly in some regions of Eastern Europe: the Balkan Peninsula, the Caucasus region, some rural areas in Russia and in former USSR central Asian republics," and may begin to appear during working ages.

[37] This issue will be discussed in a subsequent paper.

In summary, there are clear differences between male and female, urban and rural, and employed and unemployed (and informal sector employed) disabled. Yet, in order to get a truly accurate picture of disability in Kazakhstan, we need to consider the nation's vast regional differences. Kazakhstan is a huge country with sharply distinct climatic zones in its four main regions. There is also a high degree of inequality of industry location, particularly oil and metallurgy; this in turn leads to very different employment structures and standards of living across regions.

Table 4.3

Distribution of newly disabled by diagnostic category in some CIS countries

	Kazakhstan		**Russia** [1]				**Armenia**[2]		**Moldova**[3]		
	2005	Employed population	**1982**	**1992**	**2000**	**2003**	2003	Employed population	2005	including	
										urban	rural
Diseases of the circulatory system	22.5	28.4	27.5	51.5	46.1	50.9	28.4	28.4	21.0	21.4	20.7
Neoplasms	16.0	20.5	19.2	11.1	12.8	10.8	15.3	15.3	17.6	20.1	15.8
Injuries, poisoning and certain other consequences of external causes	14.8	19.0	14.1	6.6	6.4	6.9	8.5	5.2	6.5	5.1	7.4
Diseases of the nervous system	3.6	2.6	7.5	7.0	3.2	6.8	7.0	8.5	9.0	8.6	9.3
Diseases of the musculoskeletal system and connective tissue	6.1	7.6	-	5.0	7.0	5.0	5.2	4.6	8.5	8.3	8.6
Diseases of the respiratory system	2.1	1.5	6.2	4.8	3.6	4.9	3.1	3.1	2.6	2.4	2.8
Diseases of the digestive system	2.0	1.8	3.1	1.5	1.8	1.7	6.0	2.4	8.0	7.2	8.5
tuberculosis (Infectious/parasitic)	7.9	5.1	3.8	1.8	3.7	1.9	2.4	6.0	2.9	2.7	3.0
Professional diseases and poisoning1	0.3	1.1	0.5	0.4	0.4	0.4	4.6	n/av	0.1	0.0	0.2
Mental and behavioral disorders	7.0	0.7	6.4	5.2	4.3	5.2	7.0	7.0	8.1	8.9	7.4
Diseases of the eye and adnexa	8.3	4.8	n/av	n/av	3.6	n/av	n/av	n/av	6.2	5.2	6.9
Endocrine, nutritional and metabolic diseases	3.7	7.6	n/av	n/av	3.2	n/av	n/av	n/av	4.3	4.7	4.0
Other	2.4	2.0	11.7	5.1	3.9	5.3	12.5	19.5	5.4	5.4	5.4

Sourse: [1] - Committee on Statistics of the Russian Federation (Rosstat), 2004, /Russian Statistical Annual 2004: statistical collection/ . Moscow: Rosstat, pp. 279.
2 - Statistical Yearbook of Armenia. http://www.statistica.md/
3 - http://www.statistica.md/statistics/dat/936/ru/Protectia_sociala_1998_2005_ru.htm

While thorough analysis of provincial trends requires panel econometric work, and is the subject of a follow-on paper, the basic patterns (for 2005) are presented here in **Table 4.4**. Comparison of mortality rates and disability incidence among the urban and rural populations (**Figures 4.10** and **4.11**) suggests a weak correlation at best, though correction for age structure and sectoral composition might alter this conclusion. The highest incidence of urban disability tends to be in industrial "rust belt" oblasts, such as North Kazakhstan, East Kazakhstan, and

Karaganda. Relatively rural South Kazakhstan also has high disability rates (for urban and rural areas, though one should note that the main city, Shymkent, is highly industrial). These rates, and especially the high incidence of disability because of circulatory system disorders, are something of an anomaly, particularly in light of the region's relatively young age structure. Other patterns seem plausible at first glance: for example, the incidence of disability because of tuberculosis and other infectious and parasitic diseases is highest in poor, remote areas, and especially in rural Kyzyl-Orda.

Table 4.4

Newly Disabled per 10000 population in 2005

	Total		Diseases of the circulatory system		Neoplasms		Injuries, poisoning and certain other consequences of external causes		Diseases of the eye and adnexa		Mental and behavioral disorders		Endocrine, nutritional and metabolic diseases		tuberculosis (Infectious/ parasitic)	
	U	**R**	**U**	**R**	**U**	**R**	**U**	**R**	**U**	**R**	**U**	**R**	**U**	**R**	**U**	**R**
Akmolinskaya	47	30	10	5.2	8.8	4.9	8.1	6.3	4.3	3	2.2	1.5	1.4	0.9	4.5	2.6
South Kazakhstan	42	41	11	10	4.2	3.2	6.2	7.2	3.0	3	2.1	2.1	1.8	2.1	2.6	2.5
North Kazakhstan	41	33	10	7.4	8.5	5.2	5.7	4.3	2.0	2	2.1	3.1	1.1	1.2	3.7	2.5
Karagandinskaya	40	38	8.2	8.3	5.3	4	7.9	6.3	1.8	3.3	1.8	3.3	1.6	1.4	3.7	2.6
East Kazakhstan	38	31	8.3	5	10	6.3	5	4.6	2.9	3.1	2.3	3.3	1.3	0.5	1.8	2.2
West Kazakhstan	36	32	8.8	7.6	7.8	5.1	4.5	3.2	1.7	3.3	1.8	2	1.6	1.9	2.7	3.1
Mangistauskaya	35	31	8.4	11	4.7	2	4.9	4	2.6	2	1.7	2	1.5	0.9	4.5	3
Pavlodarskaya	33	31	6.4	5.6	8.8	5.6	4.4	5.3	3.4	5.1	1.6	1.7	1	1.1	3	2.6
Atyrauskaya	32	19	6.9	4.1	4.3	2.8	3.8	1.9	3.0	2.4	1.7	1.4	0.7	0.4	5.7	2.2
Almatynskaya	30	25	7	5.7	5.2	3.7	4.2	3.4	1.7	1.4	2.5	2.8	1.2	1	2.4	1.8
Kostanaiskaya	29	25	5	4.1	6	4.5	4	4.3	4.0	4.1	2.9	2.5	0.9	0.6	1.8	1.5
Aktyubinskaya	27	18	6.1	4.1	4.4	2.2	3	1.9	3.5	2.7	1.6	1.8	0.5	0.4	3.3	2.4
Kyzylordinskaya	26	46	5.4	7.1	3.1	7.9	4.5	5.1	2.3	4.5	2.2	6.8	1.1	0.4	3	7.2
Zhambylskaya	25	42	5.8	10	3.2	3.7	2.3	5.3	2.6	5.1	2.1	4.1	1.1	1.6	1.2	0.4
Almaty	25		7.4		4.9		3		1.5		1.8		0.7		0.8	
Astana	24		4.5		4.5		3.7		1.7		1.6		1.1		2.1	

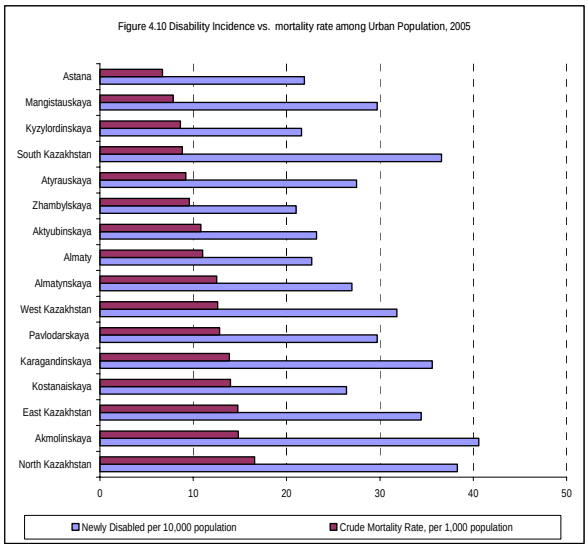
Source: Ministry of Labor Report on Disability in Kazakhstan

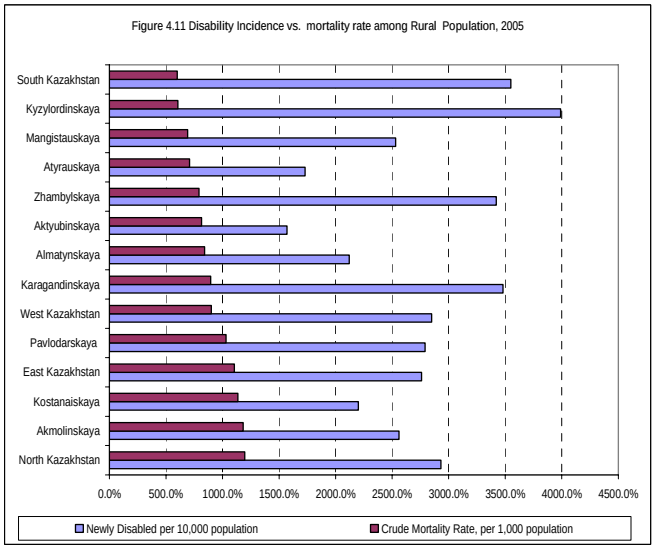
Table 4.5

Kazakhstan: distribution of newly disabled workers by diagnostic category, 1980-2004

Impairment listing	1980-1985	1986-1990	1991-1993	1994-1996	1997-2003	2004-2005	2005
Circulatory	20.2	23.6	23.2	24.9	27.1	29.0	28.4
Neoplasms	17.4	19.0	16.3	15.5	17.3	21.1	20.5
Injuries	17.1	14.1	14.7	14.3	16.7	18.2	19.0
Musculoskeletal	4.8	6.2	7.6	7.8	7.9	7.7	7.6
tuberculosis (Infectious/parasitic)	6.4	5.5	4.3	4.2	4.3	4.9	5.1
Diseases of the eye and adnexa	4.8	4.4	5.6	6.8	5.4	3.4	4.8
Other	7.3	7.7	8.9	6.7	6.4	4.5	4.3
Endocrine, nutritional and metabolic diseases	n/d	n/d	n/d	2.6	2.8	2.6	2.7
Nervous system	5.2	5.0	5.0	5.0	3.6	2.9	2.6
Diseases of the digestive system	3.7	3.2	2.9	2.5	2.8	2.0	1.8
Respiratory	6.9	6.5	5.9	5.0	3.1	1.6	1.5
Professional diseases and	0.7	0.7	2.0	1.7	1.0	1.5	1.1

poisoning							
Mental disorders	5.5	4.0	3.6	2.9	1.6	0.7	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0





A sense as to how disability structure according to type of diagnosis has changed since the Soviet era and years of perestroika can be seen by comparing parameters over the years 1980- 2005. Unfortunately, Soviet-era statistics recorded disability by type of diagnosis only for the employed disabled, so that it is possible to compare only this contingent. As **Table 4.5** shows, critical changes have occurred in disability structure. There has been a rise in the share of disabilities caused by diseases of blood circulation system (from 20.5% to 29.0%), neoplasms (from 17.7% to 21.2%), and injuries (from 16.6% to 18.2%). Correspondingly, decreases were recorded in shares of disabilities due to tuberculosis (from 6.3% to 4.9%), mental disorders (from 5.4 to 0.7%), respiratory diseases (from 6.9% to 1.6%), and diseases of the nervous system. Disability share due to professional hazards rose during 1980-1993, but then dropped markedly. The large decline in incidence of disability due to chronic diseases (especially neoplasms and circulatory system diseases) in 1997-2005 relative to earlier years (**Table 4.6**) seems particularly unlikely to reflect underlying health improvements. In reality, mortality from cancers is stable, while external cause (injuries) and cardiovascular mortality is considerably higher than in the Soviet era.

It is difficult to assess whether decrease of shares of disabilities due to tuberculosis and nervous system are accurate, but it seems that the extremely low mental illness among today's employed population is unrealistic if we compare it with corresponding data in the past. On the other hand, we expect that those employed during Soviet era who suffered from mental illnesses quite likely became unemployed or self-employed after the collapse of the Soviet Union, thereby moving them to the "unemployed population," according to MLSP terminology. Given the high incidence of mental illness among the unemployed (ranging from 8.4% to 10.7% of the total; see Table 4.2), such an explanation may account for much of the apparent decline.

Table 4.6

Disability incidence among disabled workers by diagnostic category, 1980-2004

(per 10,000 population)

Impairment listing	1980-1985	1986-1990	1991-1993	1994-1996	1997-2003	2004-2005
Circulatory	4.7	5.1	5.7	5.2	2.9	2.6
Neoplasms	4.1	4.1	4.0	3.2	1.9	1.9
Injuries	4.0	3.1	3.6	3.0	1.8	1.6
Musculoskeletal	1.1	1.3	1.9	1.6	0.8	0.7
Respiratory	1.6	1.4	1.5	1.0	0.3	0.1
Nervous system	1.2	1.1	1.2	1.0	0.4	0.3
tuberculosis (Infectious/parasitic)	1.5	1.2	1.1	0.9	0.5	0.4
Mental disorders	1.3	0.9	0.9	0.6	0.2	0.1
Diseases of the eye and adnexa	1.1	0.0	1.4	1.4	0.6	0.3
Diseases of the digestive system	0.9	0.7	0.7	0.5	0.3	0.2
Professional diseases and poisoning	0.2	0.2	0.5	0.3	0.1	0.1
Nutritional/metabolic					0.3	0.2
Other	1.7	1.7	2.2	0.9	0.4	0.2
Total	**23.3**	**21.7**	**24.7**	**20.7**	**10.7**	**8.9**

We should emphasize that the method of gathering disability incidence data in Kazakhstan in the Soviet Union was based on population statistics, and was generally reliable. Correspondingly, the reported data are quite accurate. The situation with respect to health and hospital statistics differed sharply, as officials had incentives to underreport events that could reflect badly on their performance, "given the role of the statistical agencies in the Soviet Union in controlling and checking up on the performance of other government offices" (Anderson, *et al.*, 1994:13, who also provide a less positive assessment of Soviet population and health data). On the contrary, the MSECs and the Ministry of Labor never have had cause to hide information about new disability incidence, since such information is directly tied to funding. Hence, the MLSP regional medical and social examination departments that have submitted annually

statistical form N7 (Report of the regional medical and social examination departments of the Ministry of Labor) since the 1970s always have provided unbiased information regarding the number of disability incidences and their diagnosis structure. MLSP in turn always submits summarized data to Goskomstat without any changes.

5 DISABILITY *VS*. DISEASE AND MORTALITY

A possible reason for the decline in adult disability incidence during the past 15 years in Kazakhstan would be adult population health improvement, if such gains in fact occurred, which in fact was not the case. On the other hand, if child disability were also caused by underlying health, then we would expect the opposite pattern, namely child heath deterioration. It is difficult to imagine how such opposite trends could coexist, even assuming that there are factors that are uniquely harmful to children or beneficial to adults, and an assessment of the health status of Kazakhstan's population does not point to any obvious mitigating factors.

Table 5-1
Selected mortality due to all causes by age-groups in Kazakhstan compared with Eur-A and Eur-B+C: SDR per 100,000 population

	Kazakhstan (2003)	Eur-A(2002)	Eur-B+C (2002)	Excess Kazakhstan to		KZ 2003 Change in comparison 1995
				Eur-A (%)	Eur-B+C (%)	
0-14	180	49	152	265%	19%	-5.0
15-29	206	56	161	268%	28%	-0.9
30-44	527	120	454	338%	16%	0.0
45-59	1,466	436	1,295	237%	13%	-0.6
60-74	4,067	1,571	3,412	159%	19%	0.2
75+	14,000	8,060	12,339	74%	13%	1.5

Source: WHO (2005)

Table 5-1 presents comparative health indicators for Kazakhstan and two country groups designated by WHO (2005) as Eur-A[38] and Eur-B+C.[39] There is little surprise that life

[38] Eur-A comprises Andorra, Austria, Belgium, Croatia, Cyprus, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, Malta, Monaco, the Netherlands, Norway, Portugal, San Marino, Slovenia, Spain, Sweden, Switzerland and the United Kingdom. However, data for most indicators are unavailable for two of the 27 countries: Andorra and Monaco. Therefore, unless otherwise indicated, Eur-A and averages for Eur-A refer to the 25 countries for which data are available.

[39] Eur-B+C comprises Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Poland, Republic of Moldova, Romania, Russian Federation, Serbia

expectancy at birth (hereafter, LE) in Kazakhstan is about 18 years below levels in countries with very low child and adult mortality. Yet, it is striking that Kazakhstan's life expectancy is about three years below the average even for those countries with high adult mortality is unanticipated. Most striking of all is that LE is higher in all Central Asian countries with much lower per capita income, though to this mainly may reflect mortality underreporting in these countries. A similar pattern emerges from comparing Kazakhstan with Eur-A and Eur-B+C based on the healthy life expectancy (HALE) indicator. According to WHO estimates for 2002 (2004), Kazakhstanis have 55.9 healthy years on average (female 59.3, male 52.6 years), some 15.7 years less than the Eur-A average of 71.6 years and 4.6 years below the Eur-B+C average of 60.5 years (**Table 5-2**). Even if we discount the reliability of data of some Central Asian republics and their higher rank in LE compared to Kazakhstan, it is difficult to dispute the WHO (2005) conclusion that "LE in Kazakhstan is somewhat lower than would be expected on the basis of real GDP levels (US$ 5870 PPP in 2002) which are very close to the Eur-B+C average ($6853 PPP in 2002)." Furthermore, as Becker and Urzhumova (2005) document, Kazakhstan has had only a very modest mortality recovery during its recent era of rapid economic growth.

Table 5-2

Kazakhstan LE and HALE compared with Eur-A and Eur-B+C

	Kazakhstan (2003)	Eur-A (2002)	Eur-B+C (2002)	Kazakhstan less	
				Eur-A	Eur-B+C
LE	63.6	78.9	68.1	-15.3	-4.5
HALE	55.9	71.6	60.5	-15.7	-4.6

Source: WHO (2005)

While it is possible to criticize the health data collection system Kazakhstan inherited from the USSR (Anderson *et al.*, 1994; Maksimova, 1999), it is based on population data and events registration, and both health and disability are registered according to rules of the International Classification of Diseases (ICD). This allows us to compare incidences of disease

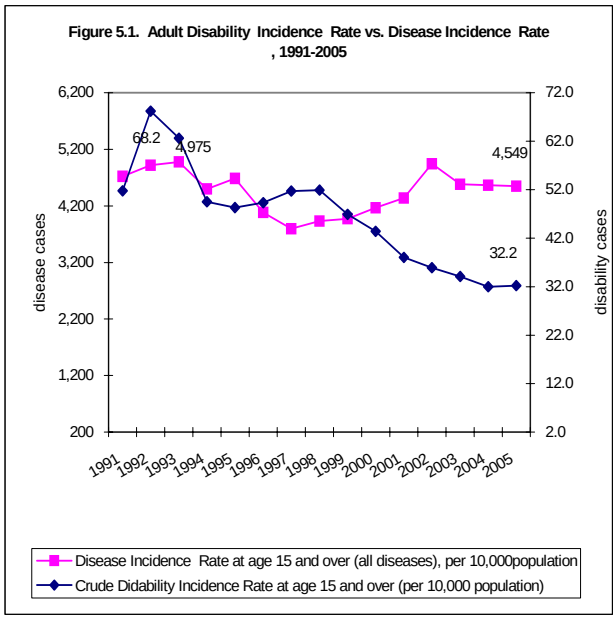
and Montenegro, Slovakia, Tajikistan, Tajikistan, Turkey, Turkmenistan, Ukraine, and Uzbekistan. Unless otherwise indicated, Eur-B+C and averages for Eur-B+C refer to these countries.

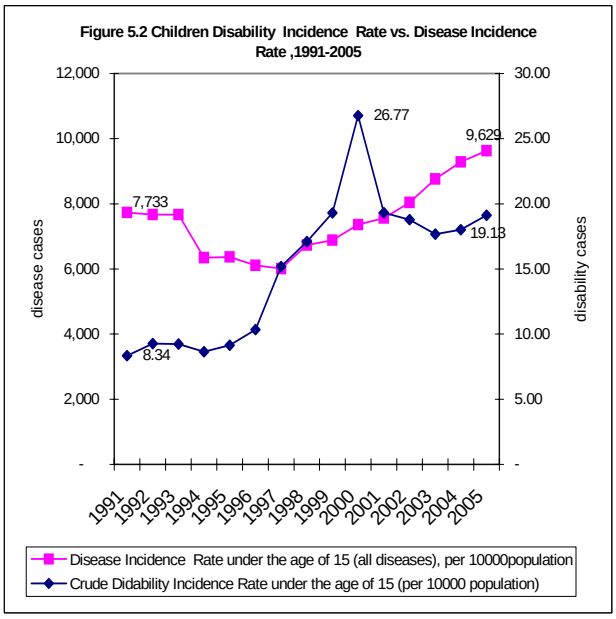
and disability occurring in the whole population over the last decade (**Figures 5-1** and **5-2**).[40] While issues of data quality are undoubtedly legitimate, systematic error will not affect trend analysis unless there is secular quality deterioration or improvement.

The opposite trends of adult disability and disease incidence rate change observed in Kazakhstan since 1992 (Figure 5.1) almost certainly are not caused by errors in disability statistics, for reasons described in Section 2. However, the trends also are not consistent with modern patterns of population ageing, which gives explanations to co-existing contradictory tendencies in disability and functioning based on recent data on human longevity, life expectancy, morbidity changes, disability trends and fall in mortality (Michel and Robine, 2004). Specifically, the picture observed in Figure 5.1 cannot be associated with cases of expansion of morbidity and/or disability (now taking place in Taiwan), a fall in mortality and increase in disability (U.K.) or reduction in morbidity and/or disability (France, Switzerland and the U.S.; see Michel and Robine, 2004). These trends are all driven by general population ageing and increased longevity, neither of which characterizes Kazakhstan.[41] Nor does Kazakhstan appear to be experiencing delayed disability; for that matter, throughout the developing world "there is so far little hope of a compression of disability or morbidity" (Kalache *et al*., 2002) – and that would include Kazakhstan.

[40] From 1979 until 1996 Kazakhstan used the Ninth Revision (ICD–9) for coding disease and disability diagnosis and since 1996 ICD–10 is used.

[41] The UNDP (2005) argues that "Kazakhstan has crossed the threshold of population ageing relatively recently. However, this process will become far more rapid very soon. At the beginning of 1999 the proportion of people aged 65 and over was 6.7%, versus 7.4% at the beginning of 2045. Kazakh experts project this figure to grow to 11.5 by 2030." In 2005, there were 42 persons 60 years old and over (32 persons aged 65+) per hundred persons under age 15.

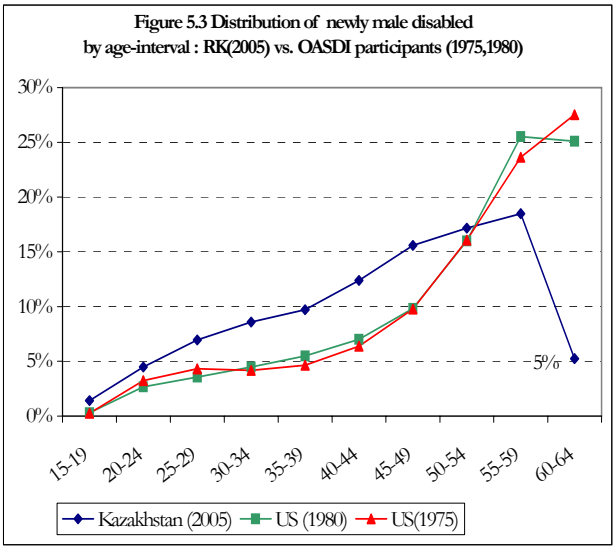


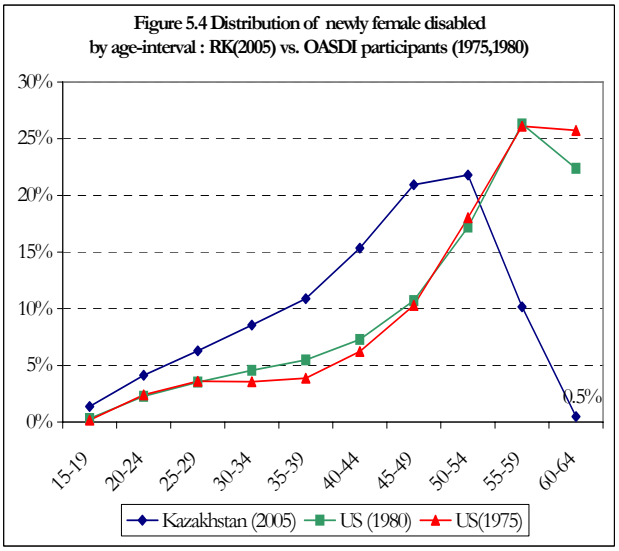


Figures 5.3 and **5.4** show the distribution of Kazakhstan's newly adult disabled persons in 2005 (for all categories except "disabled from childhood" and "others") in comparison with those awarded disability status in the United States from 1975-1980, based on Social Security Administration SSDIP data (reported in Zayatz, 1999). The period 1975-1980 is selected because the US disability criteria in use at that time were very close to those used in Kazakhstan today, and the demographic structure also was more similar. US changes in disability definitions in 1985 make comparability with more recent years problematic.[42] It is apparent from Figures 5.3-5.4 that disability rates are higher for younger and pre-retirement ages in Kazakhstan, while incidence is low but steadily increasing across age groups in the US[43].

[42] In the United States before 1985, the coding of the primary and secondary diagnoses for Social Security and Supplemental Security Income claimants was in accordance with the International Classification of Diseases: 9th Revision. In 1985, the Social Security Administration (SSA) implemented a revised method to determine and enter impairment codes in administrative records. This revised approach provides for a modified impairment coding system, generally using 3 digits (followed by zero), and is loosely based on the ICD-9 codes. (see: http://www.socialsecurity.gov/policy/docs/statcomps/ssi_asr/2005/glossary.html)

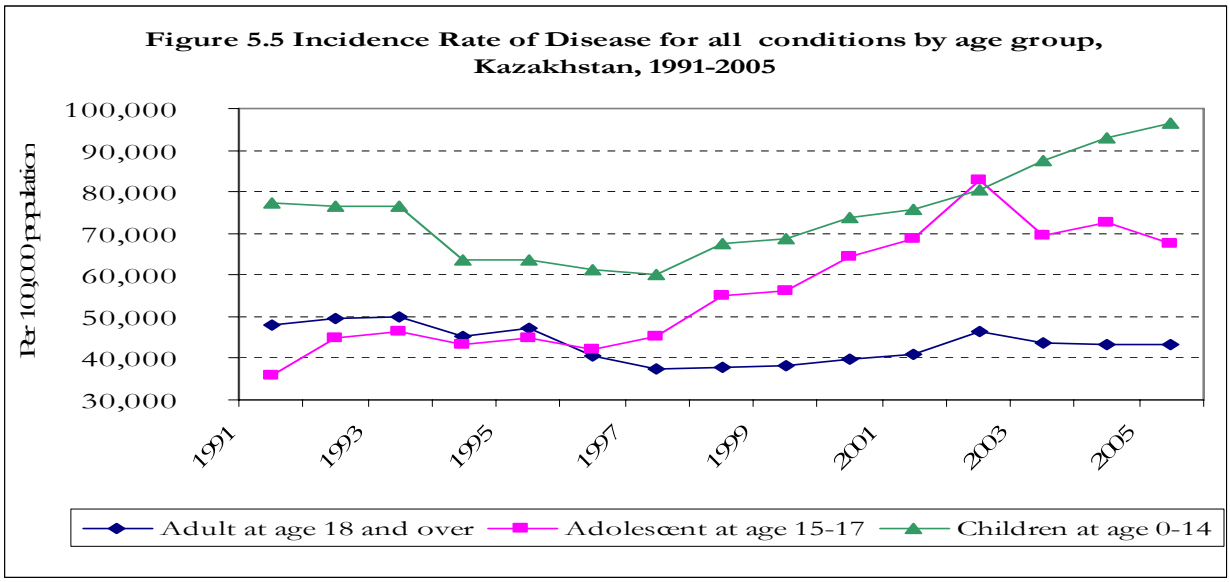
[43] For the purpose of comparability, we consider only the distribution of disabled in working age for both countries from age 15 (US) and Kazakhsatn (16) up to age 65, as individuals in the United States qualify for monthly disability insurance benefits under the Social Security Old-Age, Survivors, and Disability Insurance (OASDI) program as long as he or she has not attained normal retirement age.



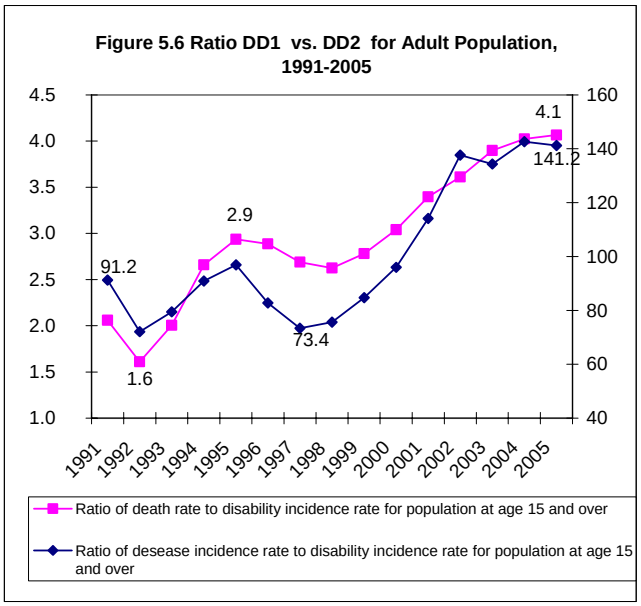


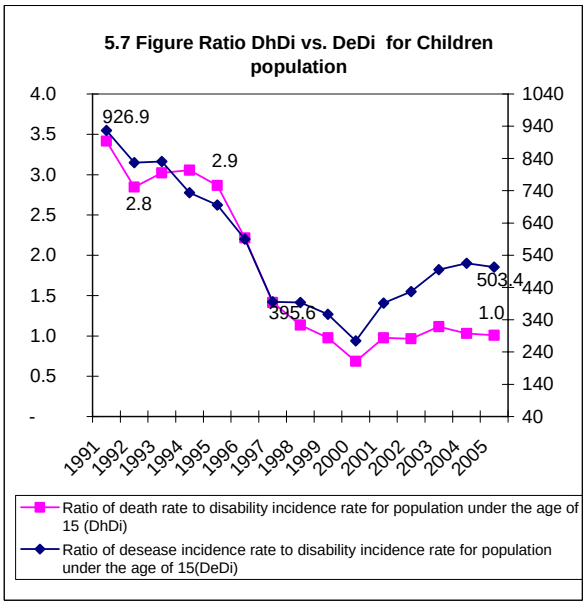
The detailed distribution of disease incidence by age group (**Figure 5.5**) suggests that the rising trend of disease incidence for those aged 15+ was most pronounced among adolescents aged 15-17 years. The rise in adolescent morbidity certainly makes the parallel trends of incidence of diseases and disability for children (Figure 5.2) more plausible, and raises further doubt both about the decline in adult morbidity and the even stronger decline in adult disability. To reiterate our previous discussion, we believe these declines mainly reflect diminished incentives to report.

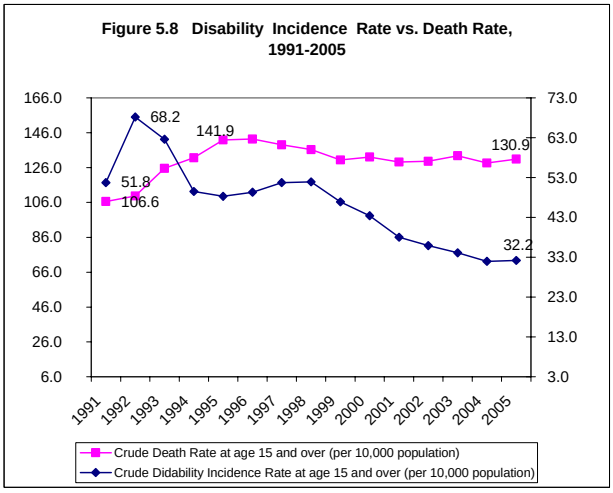
It should be noted as well that disability and health statistics differ due to different age intervals used for calculating corresponding incidence and prevalence indicators. For instance, while MLSP considers all disabled persons above age 16 as adult disabled, the Ministry of Health divides the pre-adult population into two groups: children from age 0-14, and adolescents aged 15-17. The most consistent series we can generate, with the fewest arbitrary assumptions, is to estimate disability incidence for ages 15+, especially since from 2000 the Ministry of Labor presents more detailed age structure of disability among children under age 16. Thus, incidence and prevalence data for the adult population prior to 2000 was inferred on the assumption that age 15 population structure during the 1990s was similar to that in the first half of the 2000s. While this is a rough estimate, the possible error can not be very high, as variation over time appears to be small.

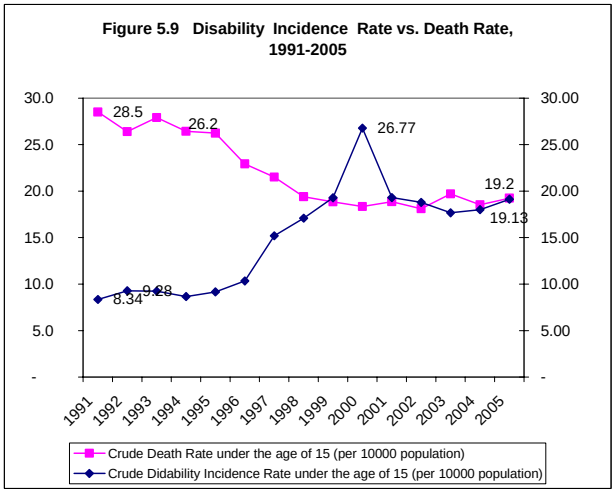


Examination of mortality rates further strengthens the argument, especially in light of morbidity patterns, that declining recorded adult disability incidence does not reflect actual health improvement. **Figure 5.6** tracks the ratio of adult death rates to disability incidence, and also the ratio of adult morbidity to disability incidence. After some oscillation in the 1990s, both curves show a sharp, secular increase from 1999-2005. In contrast, similar curves for children (**Figure 5.7**) show a strong downward trend from 1991-2000, followed by a relatively small increase in morbidity/disability, and stability in mortality/disability. Underlying these patterns are divergent mortality and disability incidence trends for Kazakhstan's adult population (**Figure 5.8**) and convergent trends for its child population (**Figure 5.9**).









Given the trends of increased morbidity and death rates, it is difficult to imagine that disability risk has actually declined. Furthermore, a detailed examination of mortality by cause points to surging accidental death and cardiovascular mortality, along with declining infectious disease mortality (Becker and Urzhumova, 2005). These sources of increased mortality are likely to be associated with increased disability, due to parallel increased injury incidence in the case of accidental deaths, and due to increased chronic illness prior to death in the case of cardiovascular mortality. Furthermore, mortality due to acute conditions that have short periods of prior disability has generally declined.

The failure of Kazakhstan's rapid economic growth to be associated with improved life expectancy and lowered morbidity is one of the least happy sides of the current boom. Only in recent years has the Government of Kazakhstan begun making a concerted effort to improve emergency medical services and public health. Age-specific death rates soared in the early 1990s, declined somewhat between 1997 and 1999, but have shown little improvement in recent years for adults. Becker and Urzhumova (2005) attribute the decline in infectious disease mortality to improved economic conditions and public health measures, and note that increased accidental death is a common byproduct of economic booms in middle-income countries. However, of primary relevance here is the absence of secular improvement in life expectancy, its apparent absence of a link with economic recovery, and its shifting patterns that would suggest greater rather than reduced disability.

It is also important to emphasize that mortality in Kazakhstan should be more tightly linked to working-age disability risk than in developed countries, since an extraordinarily high proportion of deaths occur among working-age adults. A sense of adult mortality risk is given by **Table 5.3**, which gives the proportion of people surviving to a particular age who will not survive to age 60, based on 2003 age and gender-specific death rates. Almost incredibly, nearly 40% of men who survive to age 30 will not survive to age 60.

Table 5.3

Proportion of people not surviving to age 60 by sex and age, 2003 (%)

	aged 0	aged 20	aged 30	Aged 40	aged 50
men	43.1	41.0	38.7	34.4	25.0
women	19.2	17.1	16.0	14.2	10.3

Source: UNDP, 2005

In short, it is implausible that declining disability incidence reflected real improvements in either underlying health or pace of rehabilitation. Rather, two subjective forces were at work. The first, discussed above, concerns reduced access to health services and hence reduced incentives to report a disability. In part, the dismantling of state socialism and its replacement with private enterprise, whose owners and managers may retaliate against or refuse to hire a person with a disability, further hinders reporting. So, too, does the fact that the self-employed

and those working in unregistered enterprises can expect no benefits from their enterprise. In addition, health care quality has declined in many areas, and many workers are also far from their official residence, and hence do not have access to public medical care. A second force reflects the consequences of the Government decree of 24 August 2004 (see fn. 34) according which 'any age-related changes are not sufficient to diagnose a disability'.

Tightened disability determination procedures among the retired population almost certainly have contributed substantially to the declining adult disability trend, but they are not the only factor. UNDP (2005) highlights the importance of access in registering a primary disability: some 73% of those who registered were urban residents, while only 27% came from rural areas. This differential is far higher than population shares would suggest, and rather reflects the greater availability of medical and social services in Kazakhstan's cities. Deteriorating access both to medical examiners and to non-cash services for the disabled have thus served as an additional hindrance, especially for the rural elderly.

Figure 5.10 Disability incidence among unemployed and those with unspecified employment status, 1994-2005

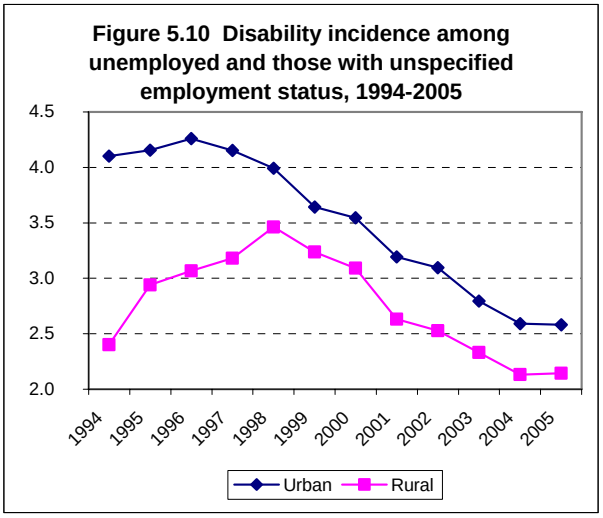
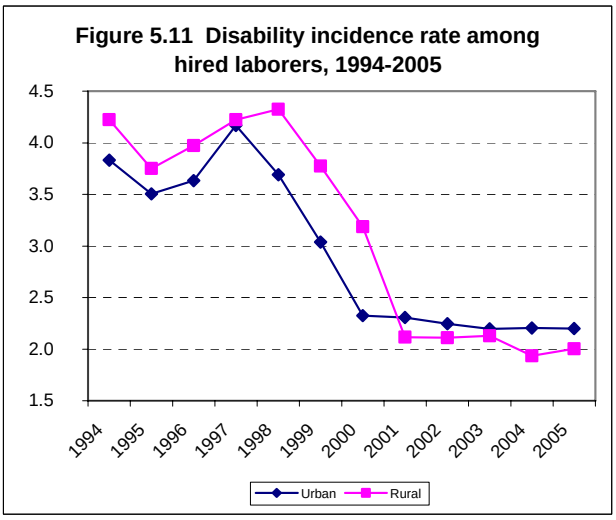


Figure 5.11 Disability incidence rate among hired laborers, 1994-2005



For the working-age population, the decline in disability incidence reflects a common feature of transition economies experiencing economic booms. Note from **Figure 5.10** and **Figure 5.11** the particularly sharp declines between 1999 and 2001 (the onset of the boom) in disability among the employed population. Note also that disability rates decline much more slowly for those outside the "formal" labor force, and are always lower in rural areas, presumably reflecting the poorer access noted above.

Kazakhstan's cities today have large numbers of migrants from rural areas, as well as from Central Asian republics to the south. Every citizen has a legal right to access to health care, but she or he can only be served for free at polyclinics in her or his region (*raion*) designated as the legal residence by her or his internal passport (*propiska*). Furthermore, the services offered without charge are limited to general therapy, general blood work, diabetes tests, and urinalyses. Treatment by specialists and all other analyses involve fees. Disabled persons of all categories and women recognized as having four or more children also receive additional services free of charge, or at a 50% discount Residents of other cities are treated in fee-charging clinics.

These rules of access in effect preclude the poor, both among the self-employed and employed population, who work in urban areas without a *propiska* from easily accessing health services. If someone in this situation is injured, there is little reason to apply for a disability examination. Doing so in the city of work would be costly, especially if health care were involved. On the other hand, access to free health care would involve going home – an unattractive option if there is any possibility of continuing to work, either immediately or after a period of recuperation. And, needless to say, the Uzbek, Tajik, and Kyrgyz construction workers and other immigrants, who crowd the construction sites and markets of Kazakhstan's boom cities, are utterly uninsured.

As data for 2006 are not yet available, we cannot verify whether the slight increase in disability incidence among employed labor (Figure 5.11) and the stabilization of incidence among unemployed and those with unspecified employment status (Figure 5.10) observed in 2005 has continued. If these trends did continue, and if there were evidence of decreasing death rates, then it could reflect a positive shift, reflecting improved health care and better access to medical examinations. In reality, though, mortality improvements have not been observed in Kazakhstan during the past two years. Thus, we accept Ivanova's (2000) conclusion, when analyzing 1995 Russian disability and disability-free life expectancy, that "a low level of disability together with a low disability-free life expectancy can only be interpreted as negative characteristics of health status, providing evidence that people are dying before they can become invalids."

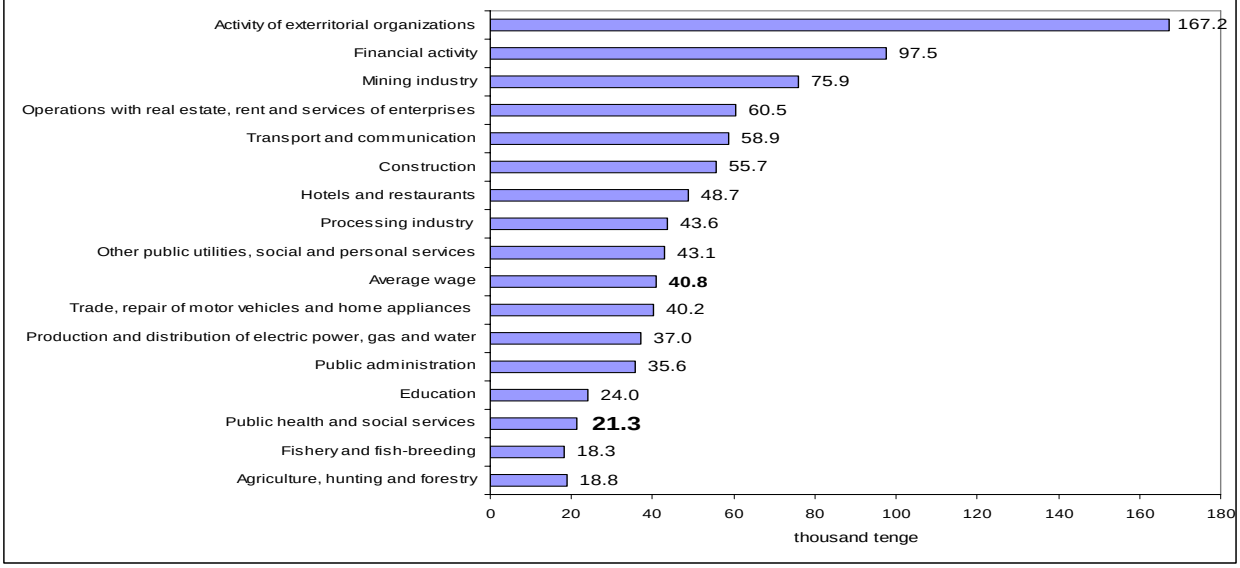
This pattern, together with the problem of hidden (underestimated) disability reflects underlying weakness and neglect of the public health care system. Nor is this weakness at a time of economic expansion surprising, since public spending on health care as a percentage of GDP fell from 4.4% at independence to 1.5% in 1998. Even though GDP has now long surpassed its Soviet-era peak, the public health expenditure share remains stunted (2.2% in 2004, 2.6% in 2005).[44] The problem of weak public health care system especially is evident in the light of the following facts:

- the average wage in the public health is among the lowest in the economy. In 2006, health-care workers earned an average wage of 21.3 thousand tenge, which was barely half of the nationwide average wage (see Figure 5.12);
- lack of medical staff and diagnostic facilities, especially in rural areas;
- lack of preventive programs and early diagnosis;
- inadequate knowledge and skills of health-care professionals;
- lack of medical institutions capable of treating cardiovascular diseases, including both surgical units and effective outpatient treatment centers. This is especially critical in light of the high incidence of cardiovascular disease in Kazakhstan.

Were the Government of Kazakhstan re-establish free clinical examination similar to that existing in the Soviet era, at least for rural and low-income urban populations, i.e. for population who can not easily afford private diagnosis, the share of disabled people in the society would increase significantly. In turn, early disability detection could help the Government undertake preventive measures in time and decrease the costs of treating chronic diseases. Ultimately, these measures should improve Kazakhstan's extremely low life expectancy. In summary, increased disability incidence is likely to indicate health care success and improved mortality rates, rather than signaling further deterioration.

[44] As the International Observatory on End of Life Care reports, WHO data indicate that Kazakhstan's public health expenditures as a share of GDP are the lowest in the CIS plus Mongolia. http://www.eolc-observatory.net/global_analysis/kazakhstan_health_care.htm.

Figure 5.12. Monthly nominal wage by branches of economy of Kazakhstan in 2006



6 CONCLUDING COMMENTS

The definition of disability in Kazakhstan since independence has approached the WHO ICF definition as result of gradual shifting from a medical to a social model, as well as legal acknowledgement of the rights of all categories of the population, including children. The methodology of determining the presence of disability also has moved toward international norms. However, many tasks remain to be fulfilled in the area of application of the ICF to a national clinical diagnosis and rehabilitation assessment, and in disability data collection.

It is a fortunate that Russia and Kazakhstan have the same disability definition and similar criteria for disability determination. In order to keep this important tradition for the purpose of comparability of disability incidence and prevalence, it is necessary to develop a uniform ICF user guide for all former USSR republics and detailed strategy of ICF application on the basis of disability population statistical categories inherited from the Soviet Union.

The method of gathering disability incidence data in Kazakhstan, inherited from the Soviet Union and based on population statistics, is highly reliable; correspondingly the reported data are quite accurate. In particular, there are two types of disability data in Kazakhstan that complement each other. The first represents a flow concept, thereby tracking disability incidence, and second one uses a stock concept, thereby reporting disability prevalence.

However, the reported disability incidence among working-age adults in Kazakhstan is inaccurate, since when registering newly disabled people, the Ministry of Labor and Social Protection uses old labor classifications in spite of the fact that Kazakhstan accepted ILO standards in 1994. As a result, the majority of newly disabled among the self-employed population – who generally cannot provide employment certificates – are inaccurately registered as being "unemployed." Thus, official disability incidence among unemployed population is overestimated and, correspondingly, disability incidence among the employed is underestimated. As long as the MLSP does not disaggregate the newly disabled into the more commonly recognized categories of self-employed, hired labor, unemployed, or economically inactive, it is important correct for the resulting inaccuracy. The results above suggest large differences between official and corrected data.

While it is possible to criticize the health data collection system Kazakhstan inherited from the USSR, it is based on population data and events registration, and both health and disability are registered according to rules of the International Classification of Diseases (ICD). This allows analysts to compare trend of incidences of disease and disability occurring in the whole population over any period of time. To summarize briefly, historical analysis shows that disability in Kazakhstan in the post–Soviet era exhibited the following new patterns:

- A high rate of disability incidence among the unemployed population, which did not exist in the Soviet era, due to full employment.
- Disability incidence among the employed population is much lower than among the unemployed. In particular, the disability incidence today among regular employees is only one-third that of the 1992 peak, and also far below Soviet levels.

- There is almost certainly substantial hidden disability resulted from deteriorating access to medical examination, especially for the sizeable rural population that has migrated from rural to urban area in search of employment, and most of all for immigrants from southern Central Asian republics working, often without official status, in agriculture, construction, and service activities.

Our bottom line assessment is that it is implausible that declining adult disability incidence reported in official data reflected real improvements in either underlying health or pace of rehabilitation. Given the trends of increased morbidity and death rates among adult population, the optimistic official picture almost certainly reflects growing underreporting rather than improvement in health conditions related to disability.

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We attempt first to create an historical picture of disability in Kazakhstan by analyzing government population statistics and studying the evolution of disability determination procedure in the former Soviet Union and independent Kazakhstan. Doing so is not a trivial task, as there has been almost no systematic research, either in Russian or English. However, the effort is useful, as it enables us to cast light on the set of problems concerning disability in Kazakhstan, including those that remain hidden in the official reports.

We conclude that the optimistic official picture of disability patterns in Kazakhstan is almost certainly inaccurate. As the paper details, the quality of official disability data is high, and much can be learned from the patterns. However, changing definitions and strictness of enforcement make time series comparisons problematic, and the improvements in adult disability recorded are inconsistent both with trends for children, and with mortality trends. Rather, we note that barriers for applying disability benefits have increased and incentives to report disabilities have decreased markedly in the past 15 years, so that it is virtually certain that there is substantial hidden disability.

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